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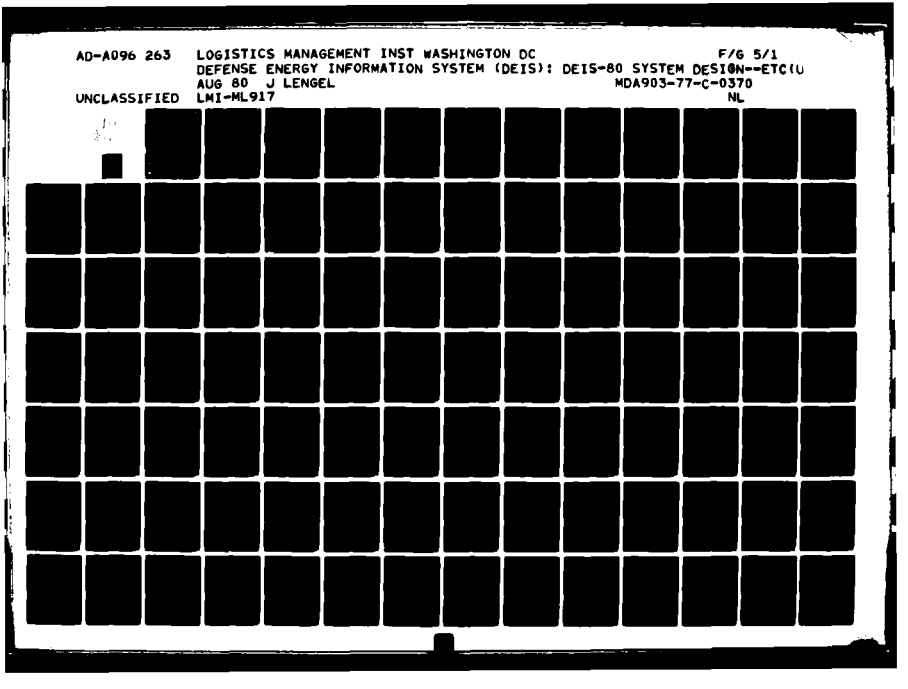

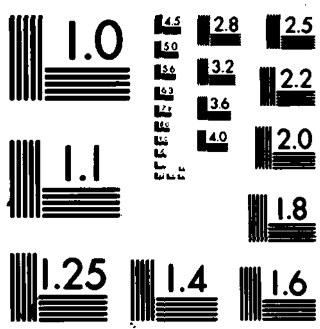

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The Defense Energy Information System (DEIS) is a worldwide, automated, energy management information system. It provides data on petroleum products used as mobility fuels by the military departments as well as most energy sources used for utility services at DoD installations.

DEIS consists of two related information systems. DEIS I reports the disposition and consumption of petroleum products, notably aviation

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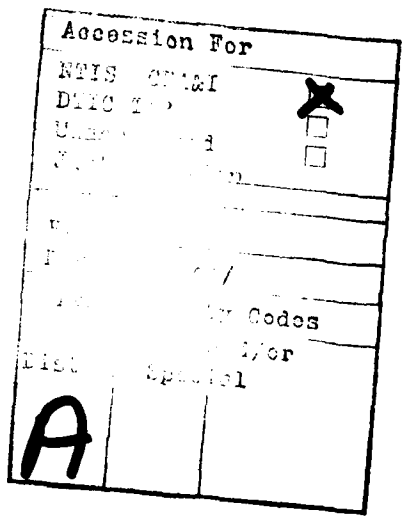
gasoline, jet fuels, motor gasoline, distillate and residual oils within DoD. DEIS II reports the consumption of utility energy, such as electricity, natural gas, purchased steam/hot water, fuel oil and coal. It reports the consumption and generation of energy from renewable sources.

This document presents the System Design Specification for the enhanced DEIS (DEIS-80). As specified, DEIS-80 improves the utility of the existing system by including additional data, supporting management queries of the DEIS-80 data bases on-line, and providing the capability for automated data analysis.

This System Design Specification serves as the guide for the computer programming of DEIS-80. It adheres to the requirement for system specification in the "Automated Data Systems Documentation Standards."

DEFENSE ENERGY INFORMATION SYSTEM (DEIS): DEIS-80 SYSTEM DESIGN SPECIFICATIONS

August 1980



Joan Lengel

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PREFACE

This document presents the System Design Specification for the enhanced Defense Energy Information System (DEIS-80). DEIS-80 has been developed for the Office of the Deputy Assistant Secretary of Defense for Energy, Environment and Safety, and specifically for the Defense Energy Policy Office, which manages the existing information system (DEIS) in its energy policy role for the Department of Defense.

This System Design Specification describes the functions of DEIS-80 as derived from the existing DEIS and recommended improvements to it. These improvements include the requirement for a higher degree of accuracy for energy data, increased flexibility in report procedures, and more timely data collection and reporting. DEIS-80 improves the utility of the existing system by including additional data, supporting management queries, and providing data analysis.

These improvements are based on the requirements of DEIS users and, in part, on the suggestions of DEIS data collectors and data processing support personnel. Those associated with DEIS were generous with their ideas and opinions, which, to a large extent, have been incorporated into this System Design Specification.

DEIS-80 contains two subsystems. The DEIS I subsystem processes data for, and reports on, inventories, acquisition and consumption of petroleum products within DoD. The DEIS II subsystem processes data for, and reports on, the inventories (where appropriate), consumption, and conservation of utility energy within DoD.

DEIS-80 will provide data base management capabilities for energy management throughout the DoD. The system will be used by the Defense Energy

Policy Office to better manage DoD energy resources. The periodic DEIS-80 output reports will also be provided to the Military Services for internal energy management purposes and distribution to major commands and their installations.

This System Design Specification serves as the guide for programming DEIS-80. It adheres to the requirement for system specifications in the "Automated Data Systems Documentation Standards," Department of Defense (OASD-Comptroller), 7935.1-S, September 1977.

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SECTION 1. GENERAL

1.1 Purpose of the System Specifications

The Logistics Management Institute is under contract to the Office of the Assistant Secretary of Defense for Manpower, Reserve Affairs and Logistics (OASD(MRA&L)), to develop improvements to the Defense Energy Information System (DEIS). The modified DEIS, named DEIS-80, includes the use of a data base management system (DBMS) and additional data items to improve the usefulness of the system. DEIS-80, like the existing DEIS, provides information concerning the inventory and consumption of energy in DoD.

1.1.1 Purpose and Scope

The purpose of this System Specification (SS) is to specify the DEIS-80 system design. It is written using the "Automated Data Systems Documentation Standards," Department of Defense (OASD-Comptroller), 7935.1-S, September 1977, as a guideline and contains the following sections.

- Section 1 - General Information: This section provides an introduction to DEIS, its subsystems DEIS I and II, the current operational environment, and reference documents.

- Section 2 - Summary of Requirements: This section presents a general description of DEIS-80 and specifies how its functions satisfy the operational requirements goals. This section also specifies system performance in the areas of accuracy and validity of data, scheduling and timing, and system flexibility.

- Section 3 - DEIS-80 Environment: This section describes the equipment, support software, and system interfaces which comprise the DEIS-80 environment.

- Section 4 - DEIS I Design Details: This section specifies the DEIS I subsystem of DEIS-80. The specification includes subsystem functional capabilities, design approach and logic flow, processing required to support each function, definition of the inputs and outputs for each function, and the computer program flow of each function.

- Section 5 - DEIS II Design Details: This section specifies the DEIS II subsystem of DEIS-80, in the manner described above for DEIS I.

- Appendix A - DEIS I Data Dictionary: This appendix provides a data element dictionary for all items specified as part of the DEIS I data base.

- Appendix B - DEIS II Data Dictionary: This appendix provides a data element dictionary for all items specified as part of the DEIS II data base.

- Appendix C - DEIS Data Collection Card Formats: This appendix contains the card columns and data items on each of the DEIS data input cards.

1.1.2 DEIS Functions and Capabilities

The primary objective of DEIS-80 is to improve current procedures and data availability in order to provide more timely, accurate, and flexible service to system users.

DEIS is composed of two major independent subsystems which are carried over from the existing DEIS; DEIS I and DEIS II.

1.1.2.1 DEIS I Subsystem

DEIS I reports the acquisition, inventory, disposition, and consumption of petroleum products such as aviation gasoline, jet fuels, motor gasolines, distillate, and residual oil within DoD. DEIS I software capabilities include the initial sort and edit of input data, loading and maintenance of the DEIS I data base, loading and maintenance of DEIS I header information and tables, identification of changes in reporting activity status, production of standard reports, and the capability for receiving ad hoc reports.

The modified DEIS I subsystem provides all the capabilities of the existing DEIS I. In addition, it incorporates new petroleum products and, through its DBMS, the flexibility to add new data elements (by reorganizing the data base) and produce new reports without major program modifications.

1.1.2.2 DEIS II Subsystem

DEIS II reports the consumption of utility energy products, such as electricity, natural gas, purchased steam/hot water, fuel oil, coal, solar/thermal power, and wind power. This subsystem also reports environmental data such as degree days during a reporting period, size of buildings in use, and the type of activity (such as storage or housing) for which the buildings are used. DEIS II software capabilities include the initial sort and edit of input data, unit conversions where required, loading and maintenance of the DEIS II data base, loading and maintenance of DEIS II header information and tables, extraction of changes in reporting activity status, production of standard reports, and the capability for receiving ad hoc reports.

The modified DEIS II subsystem provides all the capabilities of the existing DEIS II. In addition, it incorporates several new products and environmental data. Through the use of a DBMS, DEIS II provides the flexibility to add other data elements and produce new reports without major program modifications.

1.1.3 Current DEIS Organizations

DEIS-80 is designed to function within the current data collection and reporting system, although the data processing system will be new. This subsection describes the current DEIS environment; however, some efforts are

underway to make short-term improvements in the timeliness and accuracy of DEIS reporting, as well as in the collection of new data elements.

DEIS depends on input from over 1,400 military bases and facilities, naval vessels, and DoD agencies. Some locations report both DEIS I and DEIS II data, while others may only need to report data in one subsystem. The data are transmitted monthly to the Defense Logistics Agency (DLA) computer center at Cameron Station, Alexandria, Virginia, via AUTODIN or DoD's message communication system. The data are input, sorted, and used to produce DEIS I and DEIS II monthly and quarterly reports and are then retained on tapes (historical data exist from fiscal year 1975). DEIS output reports are distributed to major commands in the Military Services, the reporting DoD agencies, and to various offices in DoD that perform energy-management related functions.

The Air Force Data Services Center (AFDSC) will provide programming, implementation, and operational support for the DEIS-80 functions in this System Specification. DLA will continue to provide data collection, printing, and distribution support.

DEIS reports reflect inventory data, how energy sources are utilized, and how products are issued from an activity either for bulk transfer or for consumption. The reports are currently used for supply management, energy conservation management, energy policy analysis, readiness assessment, and research and development. The Defense Energy Policy Office under the Deputy Assistant Secretary of Defense (DASD) for Energy, Environment, and Safety (EES) has overall project management responsibility for DEIS. The Defense Energy Data Analysis Panel (DEDAP) includes the Services and provides a forum for discussion of energy management information (DEIS) needs.

1.1.4 Existing Methods and Procedures

Current data reporting procedures vary between and within the Services. Each Service delegates data collection responsibility and accountability and provides automated support in the way it considers best. The following paragraphs present a general description of the activities in the existing system, including data sources and input methodologies, output reports and automated processing. More complete documentation can be found in "Defense Energy Information System (DEIS): Current System Documentation," Logistics Management Institute, ML917, March 1980.

1.1.4.1 DEIS Data Sources

DEIS I and II data are collected, coded, and reported to DLA from over 1,400 military bases and facilities, ships, and DoD agencies that use energy. Utility energy for facilities leased or managed by other Federal agencies is not included in DEIS.

The Petroleum Oil and Lubricants Officer, the Fuels Officer, the Supply Officer, or the Engineering Officer on the base or facility consolidate inventory and usage data for all petroleum products used. A base or facility's engineering or public works office is usually responsible for collecting and reporting utility inventory and usage data. Data are usually consolidated and

reported for each base or facility even if several commands are represented on the base.

1.1.4.2 Input Methodologies and Data Flow

All data are transmitted in an 80-column punched card format. DEIS I requires three card formats for each petroleum product reported; DEIS II requires one card for each utility product. The majority of those reporting DEIS data submit data monthly to the DLA computer center using AUTODIN-I or the standard message form (DD Form 173). There are several major exceptions, as follows:

a) DEIS I data collected by the Air Force are included in their stock fund system and reported to DLA after accounting reconciliations have been made.

b) DEIS data for Army bases under FORSCOM and TRADOC flow through command headquarters.

c) DEIS II data are reported monthly by Army bases and facilities. These data were reported quarterly prior to October 1980.

d) National Guard headquarters receive and review DEIS data from their activities before transmitting the data to DLA.

e) Ships at sea report by ship-to-shore communications to an on-shore station. These data are then transmitted in the same manner as the station's reports.

f) A few activities do not have access to a communications network. Any DEIS data from these activities are sent to DFSC personnel at DLA via facsimile or mail.

1.1.4.3 Output Reports

DEIS reports have the same data fields as are input by the reporting activities, with the addition of subtotals and totals for some data fields. These reports reflect inventory data, how petroleum and utility energy were consumed, and how petroleum products were issued. Fifty-eight DEIS I and DEIS II output reports are produced regularly. These reports differ by their sort sequence, content, frequency and recipients. There are only 12 substantially different output report formats. DEIS-80 will produce these same reports. In addition to printed reports, DEIS data tapes are provided monthly to the Army Management System Support Agency, AFDSC, and the Naval Ship Research and Development Center for interface with other reporting systems. These tapes are described in Section 4.4.8.

1.1.4.4 DEIS Data Processing

DEIS data processing is completed using a variety of data entry equipment and a computer at the DLA facility at Cameron Station. None of this equipment is used exclusively or even primarily for DEIS data processing. Data entry equipment includes such devices as keypunches, teletype-compatible equipment, and computers which produce DEIS input as a result of local processing. The

DLA computer center consists of an IBM 370/155 mainframe using the OS operating system. Several tapes and some disk storage of this system are used by DEIS.

The existing DEIS programs are written in COBOL and perform the file update, sorting, and report formatting functions in a batch mode.

DEIS data are maintained sequentially on magnetic tapes (one per fiscal year). The tapes contain all data since DEIS was established in 1974. Data for fiscal 1975 are currently used as the "base year" data for energy conservation measurement purposes.

This five-year history consists of approximately 41 megabytes of data. Approximately 4,600 records are reported each month; each year contains approximately 55,000 records (8.25 megabytes). DEIS I records contain three card images of 80 characters (since October 1979, previous fiscal years have 150-character records), and DEIS II records contain 170 characters.

DEIS "header" data are maintained on magnetic tape. There is a separate file of header data for DEIS I and DEIS II. These files contain descriptive data elements, such as an activity's name, Service, major command, geographic location, and DoD activity address code. The files are updated as changes are reported, but the individual items rarely change.

1.2 Project References

This System Specification utilizes documentation from previous DEIS studies, analysis, and direct contact with DEIS users, data collectors, and data processors.

1.2.1 Logistics Management Institute Documentation

"Review of the Defense Energy Information System (DEIS)," Logistics Management Institute, ML800, June 30, 1978.

"Defense Energy Information System (DEIS): Base Case Description," Logistics Management Institute, WN-ML809-1, November 20, 1978.

"Defense Energy Information System (DEIS): Current DEIS Assessment," Logistics Management Institute, WN-ML809-2, February 9, 1979.

"Defense Energy Information System (DEIS): Alternative System Concepts," Logistics Management Institute, WN-ML809-3, March 16, 1979.

"Defense Energy Information System (DEIS): Recommended Design Modifications," Logistics Management Institute, ML809, June 1979.

"Defense Energy Information System (DEIS): Current System Documentation," Logistics Management Institute, ML917, March 1980.

1.2.2 Other DEIS and Related References

"Defense Energy Information System," Department of Defense, DoD 5126.46-M, May 12, 1978.

"Defense Energy Information System Modification Specifications," Department of Defense, DoD 5126.46-M, August 1978.

"Defense Energy Information System - A Preliminary Analysis," Stanford Research Institute, SRI Project 2513-4, November 1973.

"Automated Data Systems Documentation Standards," Department of Defense, (OASD-Comptroller), 7935.1-S, September 13, 1977.

1.3 Terms and Acronyms

The following terms and acronyms have been used in this report.

1.3.1 Terms

Back-Up Copy: A copy of a file or data set that is kept for reference in case the original file or set is destroyed.

Back-Up Procedures: Procedures which allow systems to be restored and interrupted processing to resume while maintaining system integrity.

Batch Processing: Pertaining to the control technique of grouping computer programs or data for input to a computer system for handling at the same time.

Data Base: The collection of computer-stored data which is accessed by a processing system and is fundamental to the performance of the capabilities of that system.

Data Base Administrator: The person responsible for the efficient organization and operation of the data base.

Data Element: A group of characters that specify an item, for instance, "month." A data element contains no subordinate items.

File: One or more records concerning places or things that are closely related and handled together for processing.

Function: One of several individual processes performed by a computer program, for instance, sorting a data base.

Interactive Processing: Pertaining to processing in which each entry elicits a response.

On-Line: (1) Pertaining to equipment or devices under control of the computer; (2) Pertaining to a user's ability to give the computer instructions and receive output without delay. Interactive processing is one type of on-line activity.

Record: A set of data elements closely related in the sense that they pertain to the same place or thing. An example is a "DoDAAC product record", which contains consumption information about a particular product at one DoD activity.

Software: Computer programs or routines prepared by computer professionals to simplify and facilitate the use of the computer.

Subsystem: A coordinated group of components which form a secondary or subordinate system usually capable of operating independently of, or asynchronously with, a controlling system.

System: A coordinated organization of people, hardware, methods and procedures that operate together to achieve a predetermined set of objectives.

1.3.2 Acronyms

AFDSC - Air Force Data Services Center

ASD(MRA&L) - Assistant Secretary of Defense (Manpower, Reserve Affairs and Logistics)

COM - Computer Output to Microfilm

DASD(EES) - Deputy Assistant Secretary of Defense (Energy, Environment, and Safety)

DBA - Data Base Administrator

DBMS - Data Base Management System

DEIS - Defense Energy Information System

DEIS-80 - Revised Defense Energy Consumption Information System

DEIS I - Petroleum Products Portion of DEIS

DEIS II - Utility Energy Usage Portion of DEIS

DFSC - Defense Fuel Supply Center

DFSC-CB - DFSC, Office of Comptroller, Management Information & Analysis Division

DLA - Defense Logistics Agency

DoD - Department of Defense

DoDAAC - DoD Activity Address Code

GSA - General Services Administration

I&H - Installations and Housing

NAVFAC - Naval Facilities Engineering Command

NESO - Navy Environmental Support Office

OASD - Office of the Assistant Secretary of Defense

SECTION 2. SUMMARY OF REQUIREMENTS

The design of DEIS-80 is based on the procedures and capabilities identified and described in the "Defense Energy Information System (DEIS): Recommended Design Modifications," Logistics Management Institute, ML809, June 1979, and approved by the DASD (EES) and the Defense Energy Policy Council. This section describes DEIS-80, its functions, and its performance requirements.

2.1 System Description

DEIS-80 is a system for collecting, summarizing, and reporting mobility and utility energy usage information. It depends on input from Service or agency field activities or major commands and on DFSC inventory data.

The purpose of the system is to produce a series of monthly reports reflecting inventory data, how energy sources are utilized (consumed), and how products are issued from an activity, either for bulk transfer or for consumption. These reports are useful in estimating future energy requirements.

The implementation of DEIS-80 will significantly change existing data processing programs and will require the use of on-line terminals and additional software (a DBMS and application programs). AFDSC will provide the program development and implementation staff. AFDSC will also provide access to the mainframe used to process DEIS-80. Since the data are not classified and on-line access by various users is required, the INQUIRE DBMS as implemented on an unclassified computer will be used. DEIS-80 as described in this System Specification could be implemented on any large system with a generalized DBMS, however.

To minimize inconvenience to the 1,400 data collectors, DEIS data will continue to be transmitted to DLA using AUTODIN or the DoD message communication system. Revised instructions and new data collection worksheets and formats will be published in the revised DEIS user's manual (DoD 5126.46-M).

To produce the reports, data must be collected and maintained. DEIS-80 has two subsystems. DEIS I covers mobility fuels and DEIS II covers energy used for utility purposes. Each subsystem has a data base which is maintained separately. There is no interaction between the two subsystems. The subsystems differ as to the type of data collected and the persons collecting the data, but the automated functions are very similar. In this section, the subsystems are treated together, although the detailed functions (described in Sections 4 and 5) and data bases are specified separately for DEIS I and DEIS II.

DEIS-80 offers the following improvements over the existing DEIS:

a. Improved utility - DEIS-80 provides new data items needed for current user requirements, as well as the capability to support such features as ad hoc reporting, on-line queries, or trend analysis of energy data.

b. Increased flexibility - Recent developments in national energy policy, changing energy technologies, and decreasing fuel supplies

create user requirements for more and varied data. The data base structure of DEIS-80 will provide the needed flexibility.

c. Higher degree of accuracy - Problems in the current DEIS have resulted in a lack of confidence in, and reduced usefulness of, DEIS data. DEIS-80 simplifies and facilitates data entry and correction.

d. More timely data collection and processing - Problems with data collection in the existing DEIS have resulted in late or incomplete reports. DEIS-80 simplifies data collection and includes a DBMS to facilitate processing of the data.

The Defense Energy Policy Office, ODASD (EES), has overall project management responsibility for DEIS. The Management Information and Analysis Division of the Office of the Comptroller, Defense Fuel Supply Center, is the DEIS system operator.

2.2 DEIS System Functions

This subsection addresses both the manual and automated functions designed to meet DEIS requirements. Each of the automated functions will be described in greater detail in Sections 4 and 5. Since the functions are very similar for DEIS I and DEIS II, they will not, for the most part, be discussed separately in this section. The following functions are displayed in the system flowchart in Figure 2-1. The subsection numbers, where applicable, are noted on the flowchart. Figure 2-2 shows the organizations responsible for these DEIS functions.

2.2.1 Collect and Report Data

DoD activities report DEIS I and DEIS II data monthly. Both the accuracy and timeliness of the reported data will be improved by the use of self-checking input worksheets. Appendix C contains the card layout for each of the input forms.

2.2.2 Maintain Data with a DBMS

DEIS flexibility and utility will be improved through use of a generalized DBMS. There are no programming requirements for developing the DBMS, since an existing system, INQUIRE, will be used. The DBMS should have the following capabilities and features:

- Multiple user on-line access
- Host language interface to the programming language to be used for applications programs
- Automatic restart/recovery for system crashes
- Automatic logging of updates
- Ability to add new data fields (non-keyed) to existing data base records

FIGURE 2-1

DEIS SYSTEM FLOWCHART

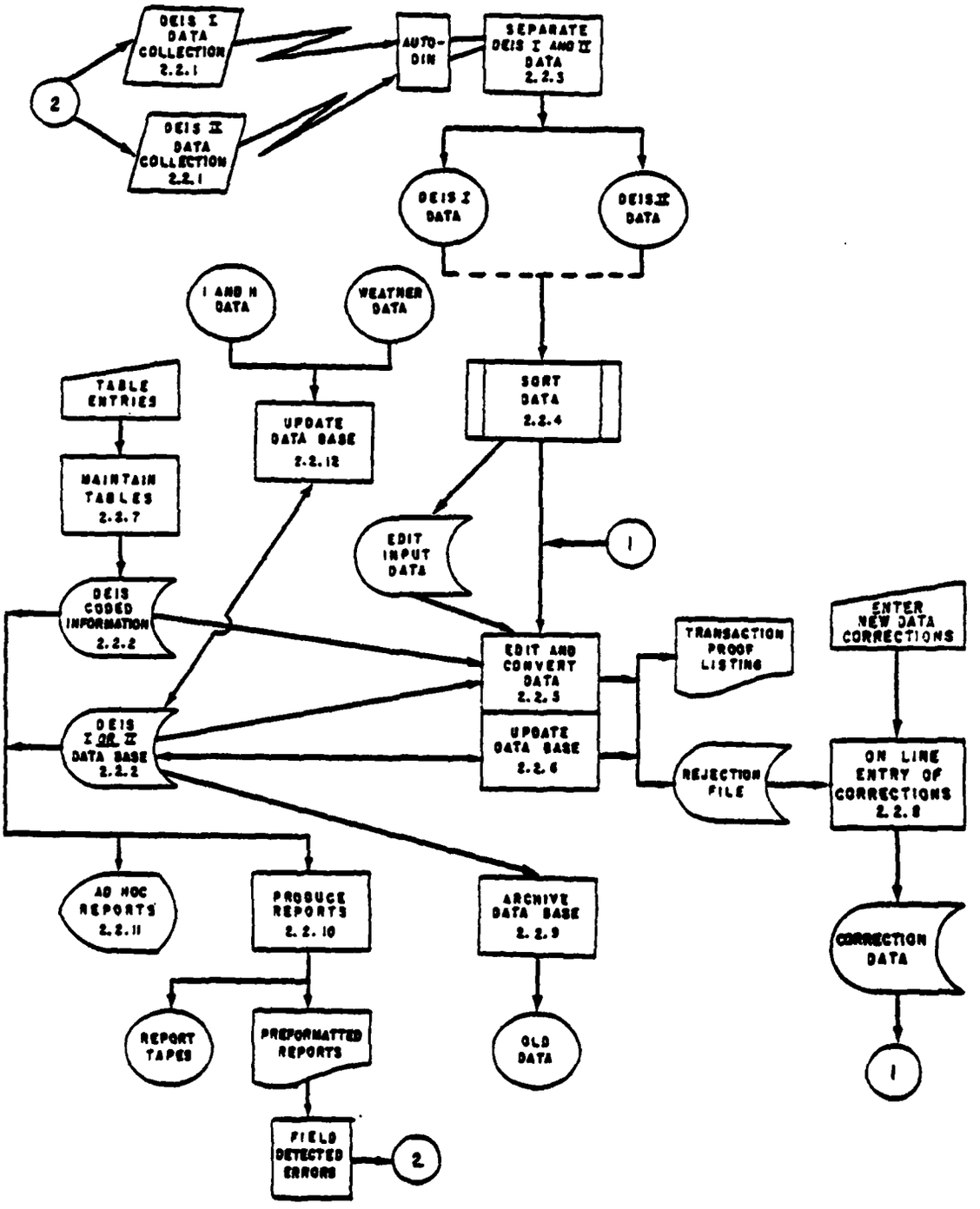
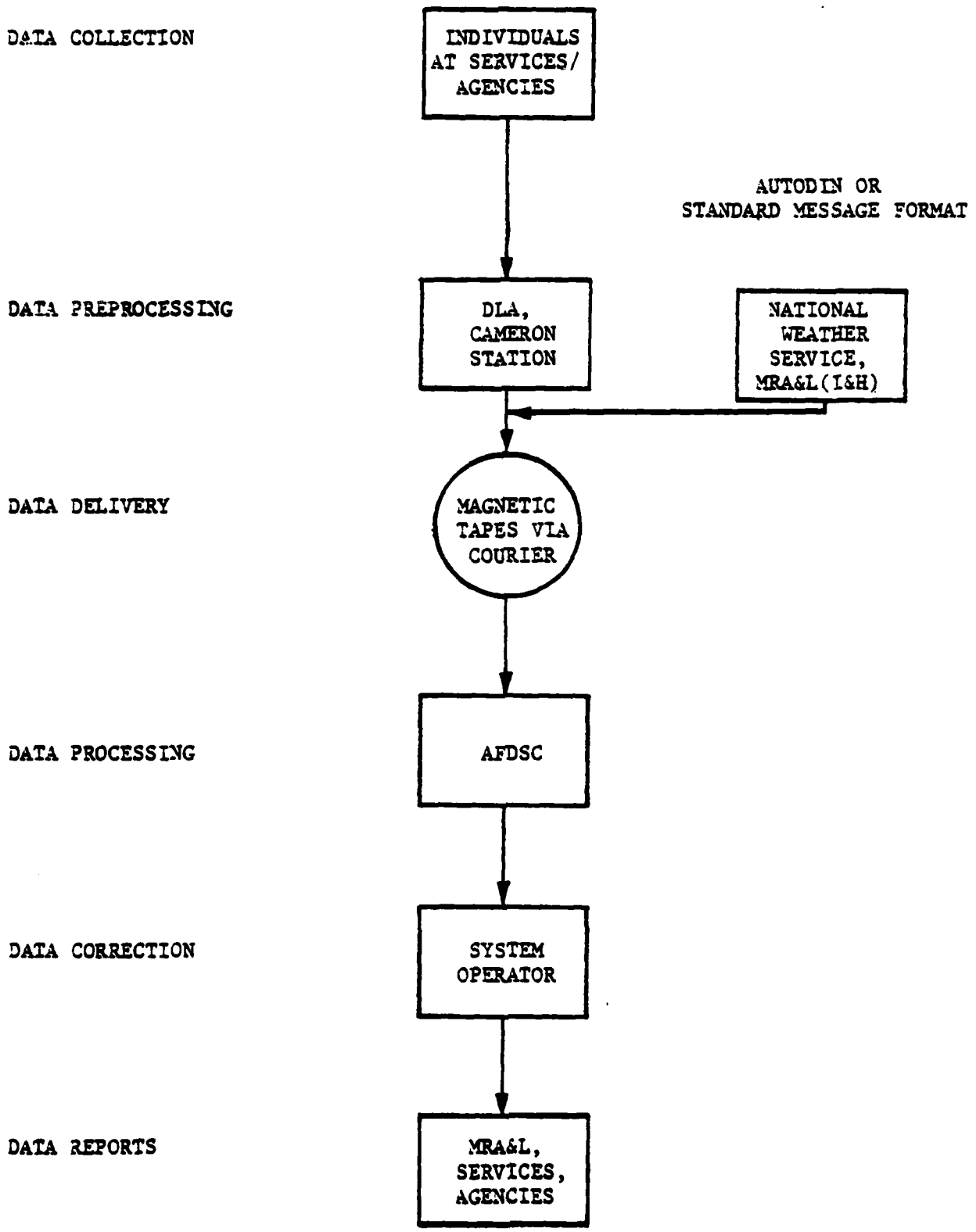


FIGURE 2-2

ORGANIZATION FLOW OF DEIS DATA



- Batch update capabilities via host language program

- User password locks at the record level (will be needed when field data input starts, one to two years after DEIS-80 implementation)

- On-line query and report generation capabilities

2.2.3 Separate DEIS I and II Data

Both DEIS I and DEIS II data are collected and reported from activities monthly. All DEIS data are addressed to the DLA computer center in a similar way. The initial separation of these data facilitates later editing and processing by each of the subsystems. The outputs of this process are separate DEIS I and DEIS II data tapes for delivery to AFDSC and further processing.

2.2.4 Perform Initial Sort

For increased efficiency in updating the data base, input data may be sorted and written to an edit input file. As indicated above, DEIS I and DEIS II data will be on separate files for this and all subsequent functions and will be processed in similar but distinct runstreams.

2.2.5 Edit and Convert Data

All data will be converted to a format compatible with that required for updating the DBMS. All data will also be edited in an attempt to eliminate errors. The edits will include checks for missing data, correct format, and form (alphabetic or numeric). Those data items which pass the edit criteria will be converted (if necessary) to standard units and ultimately applied (added) to the data base. Records containing data items which fail the edit criteria will be placed on a Rejection File. Outputs from this function are: 1) a list of records with possible errors, and a list of activities reporting late, not reporting, reporting product changes, and reporting significantly different product usage; 2) a Rejection File containing erroneous, out-of-date, or questionable data; and 3) an Update File (or data base) containing accepted records. Error statistics will be collected and reported to the system operator (DFSC-CB).

2.2.6 Update Data Base (Batch)

The actual data base update is performed through the generalized DBMS capabilities and provides for applying records with correct data to the data base. This function will be performed at least once each month. Due to late reporters and changes, the data base may be updated two or three times each month. Features of the DBMS, such as the ability to log updates automatically and create a Rejection File of records thought to be in error are also used in conjunction with the data base update.

In the future, the need to add or delete new data files or otherwise reorganize the data base may occur. The features of the DBMS will permit such updating, should it become necessary.

2.2.7 Maintain Tables

Part of the DEIS data base will contain clear (uncoded) text of header and product coded data, conversion factors, and distribution lists for each report. Maintenance of these tables will be performed by AFDSC in cooperation with the system operator.

2.2.8 Perform On-Line Data Entry of Corrections

This function provides the procedure to correct and resubmit records on the Rejection File, to change items in the data base, and to submit new data records for editing and updating the data base. Macros and screen formats may be provided to facilitate corrections and updates by infrequent users. All on-line corrections and updates will be entered on the Correction File for editing before data base updating.

2.2.9 Archive Data Base

The DEIS-80 on-line data base consists of monthly data for the most recent 13 months and for the baseline year. It also contains quarterly summaries of monthly data for 5 previous years. This function will provide processing to incorporate the monthly data into quarterly data if necessary, unload unneeded monthly data to an Archival File, delete the appropriate data from the on-line data base, and create a history file in standard DBMS format.

2.2.10 Produce Preformatted Reports

DEIS-80 will provide a series of standard reports and tapes on a scheduled basis. These reports may be prepared though host language interface with the DBMS for data retrieval. The scheduled reports include all the existing DEIS reports. The reports will be sent to the system operator for distribution to the Services, agencies, MRA&L(EES) and others as specified by the Defense Energy Policy Office.

2.2.11 Generate Ad Hoc Reports

All data in the DEIS data base will be accessible to authorized users for generation of special, one-time, or new reports. Through use of the generalized DBMS, this function will provide an easy-to-use, interactive capability to access, retrieve, format, and print data for these reports. Interface to certain data reduction and statistical functions will also be provided. The final output will be directed to the terminal originating the request or to a specified hard-copy printer as the requester chooses. The requester may also choose to save the symbolic language statements which comprise a report request so that the same report or a modified version may be requested later with minimal effort.

2.2.12 Add Data from Other Systems

Building and weather data needed for DEIS II reports will be received from the Services and agencies on magnetic tape. This function will convert the data to INQUIRE format and update the data base. This function will be performed annually for building data and monthly for weather data.

2.3 Accuracy and Validity

There will be several ways of ensuring the accuracy and validity of DEIS data. Improved manual procedures and controls will increase the likelihood of complete and accurate data being collected and recorded for all DoD bases, ships, installations, and activities. Data transmission errors will be minimized through the use of AUTODIN-I and self-checking worksheets. A number of syntax, format and value edits will be performed by the automated system when new transactions are added to the data base. A final, manual check on the data will be performed by persons who will inspect and evaluate the results of the submissions.

2.3.1 Manual Procedures

Both the accuracy and validity of DEIS data will be increased through conscientious use of self-checking input worksheets (with instructions) and reduction of manual calculations. Any automated or managerial aids the Services can support should be available to persons collecting and submitting DEIS data. In addition, the automated DEIS-80 will provide timely input summary and performance reports of each reporting activity for distribution, through the Services and agencies, to each person collecting data.

2.3.2 Data Transmission

The use of the AUTODIN-I communication system is specified in the existing DEIS and, wherever available, it should continue to be used. AUTODIN contains parity error detection and correction routines which are superior to those used in the teletype-based DoD message communication system.

2.3.3 Automated Edits and Calculations

Various data edits will be performed automatically when new DEIS transactions are added to the data base. All required data items will be examined to verify the presence of data. All data will be verified for format (numeric or alphabetic) and value, as specified in the DEIS I and DEIS II data dictionaries in Appendices A and B.

Calculations in DEIS are limited to unit conversions and summary (totals) calculations. In general, these calculations will result in a whole number; however, certain conversions should be kept to two decimal places (see Appendix B). In either situation, should arithmetic operations result in more than the required accuracy, all amounts with a number greater than or equal to five in the next significant decimal place will be rounded up, and all amounts with a number less than five in that decimal position will be truncated either to two decimal places or to a whole number, as appropriate.

2.3.4 Scheduling and Timing

As of October 1980, all DEIS data will be collected and reported as of the last day of each month. DEIS I data were previously reported as of the last Friday of the month. DEIS I reports must arrive at DLA by the third working day of the following month. DEIS II reports must arrive at DLA by the 28th of the month following the end of the reporting period. Reports are due at the Defense Energy Policy Office by the 10th of each month.

The initial sorting, editing and data base updating should be initiated the day AFDSC receives the input (usually the day after the due date). Between that time and the 9th of the month, most of the interactive processing will take place as data items are corrected and added. The system operator will enter correct or new data in an on-line mode. Late data may also be submitted by DLA on tape if the volume of late reporting activities warrants batch processing. It is expected that on-line activity may be as much as 4 to 6 hours per day for 7 working days preceding the 9th of the month. Syntax edits will be performed and response will be provided in conversational mode within several seconds.

The corrected data will then be edited and applied to the data base by a batch job initiated by the system operator. Much of the batch updating will be completed overnight (as AFDSC scheduling permits), as will production of the regularly scheduled reports (initiated the night of the 9th of each month). Depending on the volume of update transactions, the system operator may request overnight processing or processing that should be completed within two to three hours.

Ad hoc reports and queries will be provided within a few minutes to four hours, depending on the complexity of the request and whether the output is directed to the originating terminal or to a printer. Simple queries, such as those requiring no sorting and output of less than 500 lines, will be provided within 15 minutes under normal circumstances. Queries which result in sorting, extensive accumulation of data, and a larger amount of output will be provided within four hours.

2.4 Flexibility

Use of a generalized DBMS is the basis of DEIS flexibility. The DBMS permits acceptance of new data elements as they become relevant to DEIS users, easy creation of new reports, and on-line queries and corrections, and provides analytical capabilities as well.

A number of changes and improvements to DEIS have been discussed and may be implemented in the future. To ensure consistent support of DoD energy goals, any change which constitutes a change in DEIS requirements must be approved by the DASD (EES) and the Defense Energy Policy Council prior to development or implementation.

SECTION 3. DEIS ENVIRONMENT

3.1 Equipment Environment

DEIS-80 will depend on unclassified equipment at AFDSC for the bulk of its data processing. For optimal processing, at least three separate disks should be available for data base storage.

Based on the size of the data dictionary for DEIS I and DEIS II (see Appendices A and B) and the level of reporting currently processed, it is estimated that the DEIS I data base will contain 36 million characters, and the DEIS II data base, 45 million characters. These estimates do not include any overhead required by the DBMS, which may require 50 percent more disk space. The DEIS I data base will contain 7 index fields, the DEIS II data base, 10 index fields.

Based on the size of existing DEIS programs, about 38,000 lines of code may be generated, with typical programs requiring a region size of approximately 100K. This does not include the size of the DBMS (INQUIRE).

In addition to the computer mainframe, the following equipment will be utilized:

a. Communications network: DEIS data will continue to be transmitted over AUTODIN-I or the DoD message communication network (teletype-compatible terminals) in most instances.

b. DLA computer center: DEIS data will continue to be transmitted to DLA's computer center where magnetic tapes of the data will be produced for courier delivery to AFDSC. In the future, DEIS data may be routed to AFDSC and the courier service will be unnecessary.

c. Tape drives: In addition to the disk drives and packs required for on-line data and program storage, tape drives will be required both to read DEIS data as submitted from DLA and to record data for archival purposes.

d. I/O devices: A card reader, high-speed printer, terminals (CRT, graphics, hard copy), and COM capabilities are required. The system operator requires three terminals (preferable bisynchronous) for entry of data and queries. In addition, the system operator needs a 300-line-per-minute printer for small error reports and queries. The Defense Energy Policy Office requires one terminal (portable, hard copy) for queries. It is expected that not more than three terminals will be accessing the DEIS data base at any one time.

In the future (3 to 4 years), installations that have terminals may submit DEIS data directly to a file at AFDSC for rudimentary on-line editing. It is expected that less than one-fourth of the users would submit data in this manner and each user would submit an average of 30 and a maximum of 300 card images.

3.2 Support Software Environment

The support software required is already available at AFDSC and DLA and includes the following:

a. An operating system

b. At least one high-level programming language (COBOL or PL/I)

c. Communications software (to monitor and ensure accuracy of data transmission)

d. Data base management software (INQUIRE).

e. Statistical packages

f. Software similar to IBM's Structured Programming Facilities (to enhance the ease of on-line editing capabilities)

This support software provides the basis for AFDSC to produce the DEIS-80 application software.

3.3 Interfaces

There is no direct hardware or software interface between DEIS and any other automated system. However, DEIS interfaces with other automated systems via data transmissions, as described below.

3.3.1 Interface with DLA

The DLA computer center will provide tapes containing DEIS data as submitted through AUTODIN, DoD's message communication system, or hard copy. This may include data which have undergone pre-DEIS processing from any of the Services. Service data submitted on magnetic tape must be in the same form as those produced by DLA for AFDSC, that is, they must contain DEIS data card images as described in Appendix C.

After DEIS-80 is completed (including parallel testing) and fully operational, the DEIS routing indicator may be changed so that data come directly to AFDSC. This would save the time needed to transport the tapes.

3.3.2 Interface with Installations and Housing

Each of the Services, through Installations and Housing, will provide a magnetic tape of building data (see Appendix B) for each base and facility. Building information will be processed annually for the Army, Marine Corps, Air Force, and Navy for inclusion in the DEIS II data base.

3.3.3 Interface with the National Weather Service

Each month the National Weather Service will provide a magnetic tape containing monthly degree days at its weather stations near DoD bases/ installations. Those data will be included in the DEIS II data base.

3.4 Security and Privacy

DEIS contains no classified information and no information on individuals and, therefore, does not have any specific privacy and security requirements. Procedures to ensure the integrity of the data base are discussed in the following subsection.

3.5 Controls

Once DEIS implementation is substantially completed, operational control will be imposed by the Defense Energy Policy Office administrative functions. This office will be the focal point for policy concerning the needs of numerous users and a widely distributed input process. The Defense Energy Policy Office has also delegated the function of the Data Base Administrator (DBA) to the system operator (DFSC-CB).

The major required DBA functions are:

a. Review of inputs to ensure completeness and accuracy of data submissions

b. Consultation with users and AFDSC to determine if data base contents or organization requires change

c. Development of standard definitions for data items

d. Review of data base and system statistics

e. Control over initiation of update runs, restart/recovery procedures, data base back-up procedures, and initiation of report generation (initially through liaison with the AFDSC)

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SECTION 4. DEIS I DESIGN DETAILS

The overall requirement for the DEIS I subsystem is to provide reports and easy access to data so that petroleum product usage and inventories within DoD can be monitored easily and accurately. With this general design criterion as a guideline, the following requirements were developed. First, DEIS I data will be maintained on an unclassified system and use a DBMS that supports on-line queries through standard data base retrieval routines. Second, the DBMS will provide the capability to add or delete data element fields when new requirements arise. Third, data entry will be easy for users and yet controllable by those responsible for managing DEIS. Fourth, data editing, including both format and reasonableness criteria, will provide increased accuracy. Finally, code translation capabilities and report generation procedures will be included in DEIS I to increase the readability of the reports and the responsiveness of the system. The specific functions designed to meet these requirements are described in the following paragraphs.

4.1 General Operating Procedures

4.1.1 Data Requirements

The capability must be provided to input DEIS I data on-line to the Correction File as well as from cards and card images on magnetic tape. Edit procedures will prevent double entry of data; duplicate records will be printed on an error report (called a Transaction Proof Listing).

All data submitted from a field activity will be handled as an add transaction unless data for the same date, DoDAAC and product code exist in the data base. DFSC-CB will retain a listing of the original data submitted from the field activities for one year, either on the DD173 message form or a listing of validated punched cards received via AUTODIN.

4.1.2 System Scheduling Requirements

DEIS I data are due at DLA, Cameron Station, by 0800 hours on the third working day of the month. DEIS I data are due at AFDSC by 0800 hours on the next day of the month. Initial data editing, including the production of preliminary reports and the nonreporting activities report, should be completed by 0800 hours on the seventh day of the month. Data from late reporters and changes due to the initial editing will be entered between the seventh and ninth days of the month. Final reports should be provided to the Defense Energy Policy Office and the designated defense components not later than the tenth day of the month. The system operator will initiate the request for these final reports. Table 4-1 summarizes the processing cycle for DEIS I. This schedule is the optimal processing cycle and will be revised after the system is operational. The AFDSC will advise the system operator of any machine or scheduling problems affecting this schedule.

4.1.3 Data Base Back-up Procedures

The information containing DEIS I data received from DLA will be retained for three months at AFDSC and then returned to DFSC-CB. Transactions entered on-line will be retained for 24 hours. All files of transactions in error

TABLE 4-1

DEIS I PROCESSING CYCLE

Day of the Month	Responsible Party	Actions Required
last	Activity/Installation	Collect DEIS I data.
1-4	Activity/Installation	Submit DEIS I data for transmission.
5	DLA	After 0800 hours, separate DEIS data, produce tape, and send to AFDSC.
6	AFDSC*	Run initial editing and update. Send list of errors, non-reporters, and non-current data to DFSC-CB.
7	DFSC-CB	Notify non-reporters, confirm non-current data and start error corrections.
8	DLA	Separate late-arriving DEIS data, produce tape, and send to AFDSC.
9	AFDSC*	Run edit on new data and corrected data. Update data base. Deliver report tape to DLA.
10	DLA	Produce, bind, and deliver reports to Defense Energy Policy Office and the Service energy offices.
11-15	DFSC-CB	Enter remaining corrections, and late reports. Request edit, update, report cycle, if necessary.
15	AFDSC	Archive data.
all	DFSC-CB	Maintain tables and coded information. Enter corrections to data base.

* 24-hour or less turnaround is preferred but some delay is acceptable.

will be backed up and saved until the 15th of the month. A file of all changes to the data base will be saved and backed up. This file will be deleted on the 15th of the month or when specified by the system operator. The back-up of this file will be retained for one year. The entire data base will be backed up annually in October. Monthly archive tapes of the data base (detail monthly data and summary data no longer needed on-line) will be kept for 5 years on tape or disk. This monthly archiving of data will use relevant INQUIRE capabilities so that the data base can be easily recreated.

4.1.4 Recovery Procedures

Restart and recovery procedures will conform to standard AFDSC procedures. Transaction logging, retention of DEIS I data tapes, and data base back-up will permit recovery of a damaged data base. AFDSC will develop recovery actions consistent with their operating procedures.

4.1.5 Access to Archived Data

Occasionally, data not contained in the on-line data base will be needed. Procedures (using INQUIRE capabilities) will exist to create a temporary INQUIRE data base containing archived data for use in on-line data retrieval and data reporting. Since archived data are not updated, this data base may need to be updated before it is used to generate reports.

4.1.6 DEIS I Data Monitoring

The Defense Energy Policy Office has management responsibility for DEIS I, and AFDSC has programming responsibility. DLA manages DEIS operations through the DEIS system operator at DFSC-CB. The DEIS system operator is authorized direct communication with all reporting activities to request late reports and to verify reported data. The DEIS system operator is responsible for making (with Defense Energy Policy Office authorization) all changes to data more than 90 days old. DFSC-CB also coordinates with AFDSC any changes to coded or tabular information in the data base and any changes concerning authorized users. DFSC-CB enters data on fuels in transit and works with the Defense Energy Policy Office and AFDSC when changes to DEIS are anticipated.

4.2 DEIS I Subsystem Logic Flow

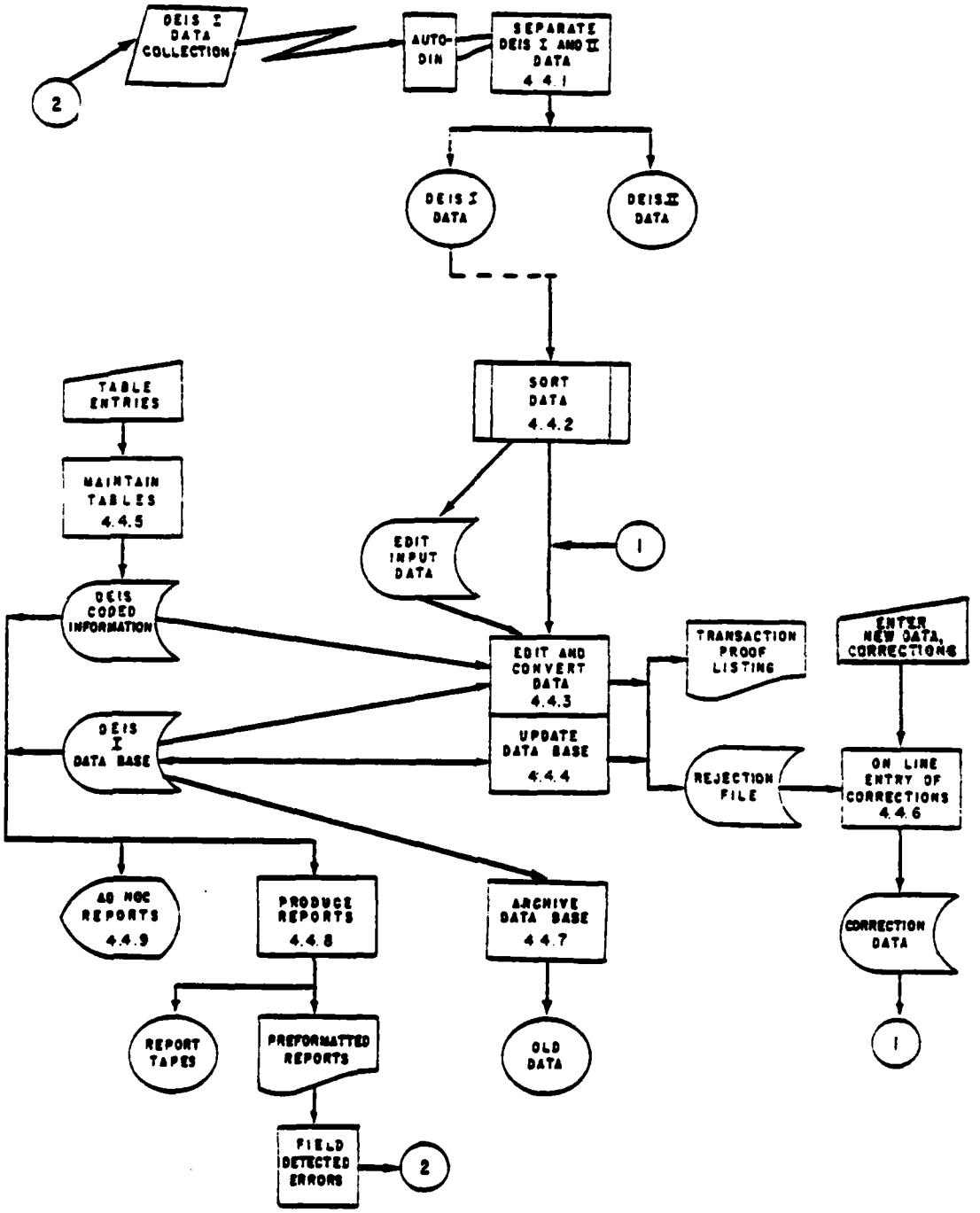
The general system flow of DEIS I is designed to provide functions to process and access petroleum product data in a timely manner. Figure 4-1 illustrates the logical flow of the subsystem.

Data enter DEIS I through AUTODIN, the DD173 message form, or other communications media. The data are collected at DLA, Cameron Station, and DEIS I data are separated from other data and recorded on magnetic tape. The DEIS I data are then transmitted to AFDSC for further processing.

At AFDSC, DEIS I data are sorted and edited for format and validity (compared to data already in the data base). Records believed to be in error are placed on the Rejection File for review. Records with a date older than 90 days are also placed on the Rejection File. In addition, those activities which have not submitted DEIS I data are identified and reported. Data which pass these edits are converted to the INQUIRE data base format, and the data base is updated.

FIGURE 4-1

DEIS I SYSTEM FLOWCHART



Data records believed to be in error are corrected and resubmitted for editing, conversion, and data base updating. Data relating to installations, such as the name and address, product names, and conversion factors, are maintained on an INQUIRE coded information file.

DEIS I reports will be produced once the monthly reporting cycle is completed or by the 10th of each month. Ad hoc reports and data base queries will be made on an as-needed basis. Errors in reports detected by the data submitters can be corrected by submitting corrections via AUTODIN or notifying the system operator of the corrections.

The data base will contain detail data for installation (DoDAAC) petroleum product usage for the most recent 13 months and for the baseline (1975) 12 months. Quarterly summary data will be in the data base for each installation and each petroleum product used for the 5 years prior to the earliest of the most recent 13 months. Each month, the appropriate monthly and quarterly data will be removed from the on-line data base and saved off-line for possible reload and retrieval.

4.3 Subsystem Data

Included in this subsection are a description of the inputs, outputs, and data used.

4.3.1 Inputs

A description of the data elements used in DEIS I, including the data element number and name, source format, and acceptable values, is contained in Appendix A. All data items from the field will be submitted monthly according to the schedule described in 4.1.2. Approximately 883,200 characters will be submitted monthly. Coded information items will be submitted on an as-needed basis.

Table 4-2 shows the layout of the data (monthly) on the master files for fiscal years 1975 through 1978. These data have been edited and may be accumulated without any further editing into quarterly data (as described in Section 4.4.7) and loaded into the data base. These tapes (one per fiscal year) are 7 track, unlabeled, even parity, 800 BPI. The record size is 150 and the blocking factor is 23.

Monthly data for fiscal years 1979 and 1980 are in MEA 2, 3 and 4 card format. These data also have been edited. The 1979 data may be accumulated into quarterly data and loaded into the data base. The monthly data for 1980 may be loaded into the data base almost unchanged. The Julian date must be converted to a month and year date. These tapes are 7 track, unlabeled, even parity, 800 BPI. The record size is 80 and the blocking factor is 40.

TABLE 4-2

PRE-1978 DEIS DATA

DATA ELEMENT NUMBER	DATA ELEMENT DESCRIPTION	LENGTH	RECORD POSITION
9	DoDAAC	6	1-6
38	TAC	1	7
	Filler	1	8
28	Region Code	2	9-10
	Filler	1	11
37	State Code	2	12-13
	Filler	1	14
21	Product Code	3	15-17
	Filler	1	18
19	Opening Inventory	9	19-27
	Filler	1	28
15	Issues*	9	29-37
	Filler	1	38
4	Receipts-Commercial	9	39-47
	Filler	1	48
11	Receipts-DoD	9	49-57
	Filler	1	58
3	Closing Inventory	9	59-67
	Filler	1	68
14	Installation Name	40	69-108
	Julian Year	2	109-110
	Julian Day	3	111-113
	Filler	1	114
17	Major Command	10	115-124
	Filler	24	125-148
32	Service Code	1	149
	Filler	1	150

* Total Consumption for these records is the same as Issues. The Region, State, Installation Name, Major Command and Service Code fields are not processed since these fields exist for the DoDAAC on the Header File.

4.3.2 Outputs

The following is a list of the reports generated by the DEIS I subsystem. More detail on the report formats is contained in the descriptions of the functions.

- Transaction Proof Listing
- DEIS I Monthly Activities Not Reporting

- DEIS I Activities Reporting Changes
- Monthly, Quarterly, and Cumulative Consumption Reports
- Monthly Petroleum Report
- Cumulative Petroleum Report
- Monthly/Quarterly Installation Summary
- State Summary Totals
- Vessel Summary Totals
- Region Summary Totals
- Monthly/Quarterly/Cumulative CONUS Summary Report
- Monthly/Quarterly/Cumulative Worldwide Summary Report
- Monthly/Quarterly/Cumulative Worldwide Category Summary
- Ad Hoc Reports

4.3.3 Data Base

The DEIS I data base will be constructed using the INQUIRE DBMS. Figure 4-2 shows a schema of the data base. It is expected that the on-line data base will contain (not including any overhead) approximately 55,000 records of 150 characters.

4.4 DEIS I Subsystem Program Descriptions

DEIS I subsystem programs are described in the following paragraphs. The functions are presented in the sequence in which they will typically be used during a DEIS I reporting cycle.

4.4.1 Separate DEIS I and DEIS II Data

The processing required for this function exists at DLA and will be used without modification.

4.4.1.1 Purpose

Although DEIS I and DEIS II data may arrive at DLA on the same day, the two subsystems are separate and require separate editing and processing steps. All data transmitted to DLA via AUTODIN or the DoD standard message form contain both a system and a routing identifier. The system identifier is contained in the first three positions of each card image. The identifier assigned to DEIS I is MEA, and the identifier assigned to DEIS II is MEB. To facilitate handling, the DEIS I and DEIS II data are separated and written on separate tapes before further processing.

FIGURE 4-2

DEIS I DATA BASE SCHEMA

	length	
DoDAAC*	6	
TAC	1	
Service	1	
Major Command	10	
DOE Region	2	
State/Country	2	
	22	
DATES (45)	4	
PRODUCT CODES	3	Variable number of products for each date
Opening Inventory	7	
Issues	7	
Commercial Receipts	7	
DoD Receipts	7	
Closing Inventory	7	
Primary Use	6	
Secondary Use	6	
Tertiary Use	6	
Total Consumption	7	
Average Daily Consumption	6	
Loss/Downgrade	6	
Aviation	6	
Quantity Issued to 1	5	
Quantity Issued to 2	5	
Quantity Issued to 3	5	
Inter-Service Transfers	6	
Non DoD Transfers	5	
Intra-Service Transfers	6	
Service Use 3	6	
Service Use 4	5	
Date of Update	4	
Correction Code	1	
	129 characters per Product Code	

Assuming an average of 5 products per DoDAAC and 1400 DoDAACs, data base size is 42.3 million bytes.

Assuming an average of 3 products per DoDAAC and 1400 DoDAACs, data base size is 26 million bytes.

* Keys are underlined

4.4.1.2 Data Definition

The only data items of the input records that need to be examined for this function are the first three positions of each input record (card image). These positions should contain MEA or MEB. Table 4-3 lists the common data fields on the input records.

TABLE 4-3

SEPARATION OF DEIS I AND II DATA

Data Dictionary Element Number	Element Name	Comments
	Card Type	System Identifier MEA or MEB
	Card No.	2, 3, or 4
10	DoDAAC	First letter designates Service
38	TAC	9 or blank
29	Rpt Date	Reporting date (month, year)
21	PROD CODE	Product Code
	Detail data	Remaining MEA or MEB record contents

4.4.1.3 Processing Logic

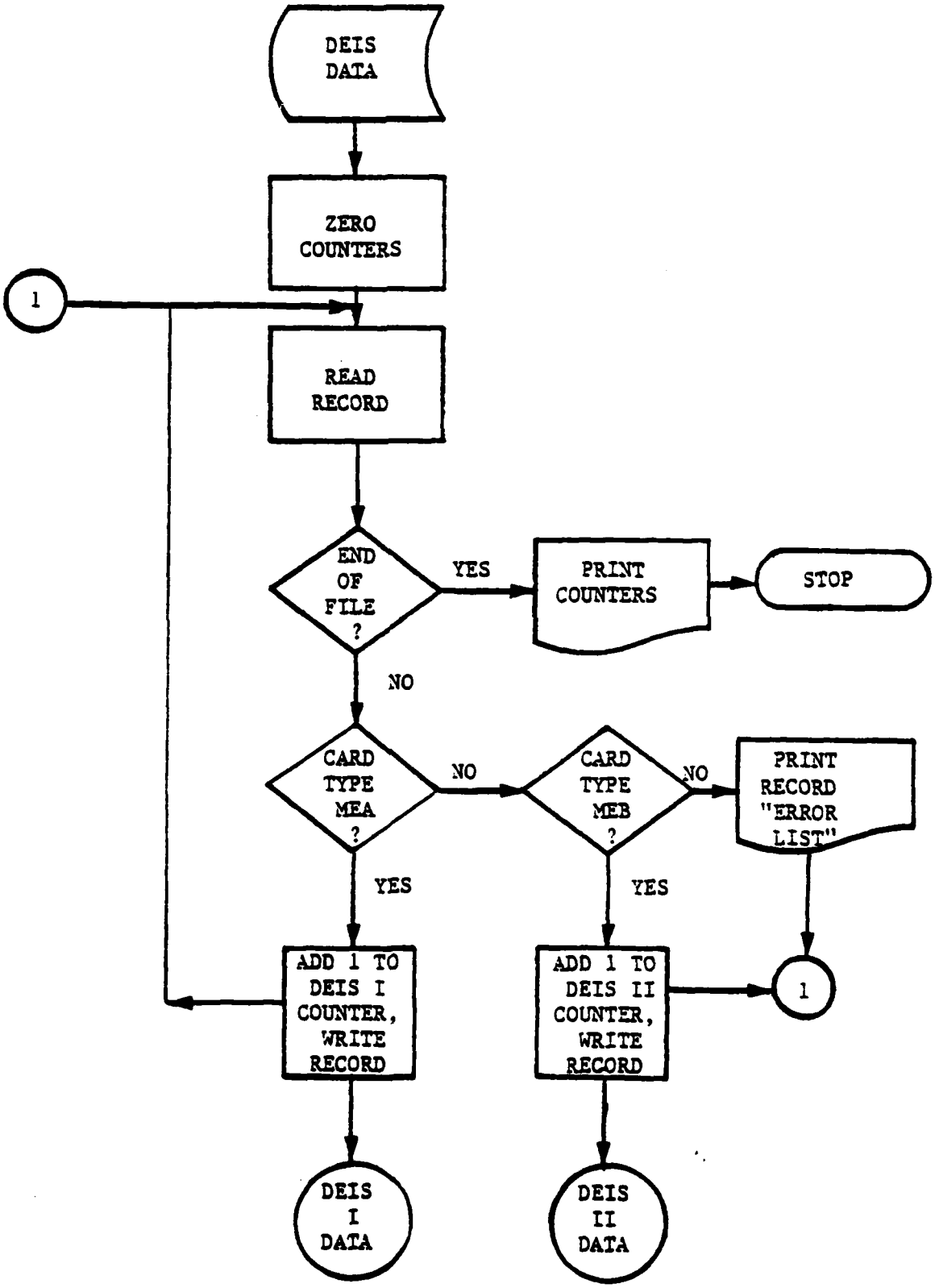
This function will be run as often as necessary to retrieve DEIS data received from DoD activities. The flowchart in Figure 4-3 details the major processing steps. If the record does not contain MEA or MEB in the first three positions, it will be placed on an error listing for examination by DLA for possible misrouting.

4.4.1.4 Outputs

The DLA output of this function reflects the input. Two tapes are produced--one for DEIS I data and one for DEIS II data. Each tape contains 80-character records (same format as the data input), with 44 records in a block. The label records are standard, the recording mode is F, and the tapes are written by DLA's IBM 370/155 facility at Cameron Station. These tapes will be delivered by courier to AFDSC for further processing.

FIGURE 4-3

SEPARATE DEIS I AND DEIS II DATA



4.4.2. Sort DEIS I Data

The processing required for this function entails a standard ascending sort on five fields of data. There will be approximately 13,000 card images to be sorted each month.

4.4.2.1 Purpose

The purpose of this function is to order the data elements for more efficient updating of the data base and editing of the data in subsequent processing steps.

4.4.2.2 Data Definition

The following data will be used in the listed sequence as sort keys:

DoDAAC
Reporting Date (Year)
Reporting Date (Month)
Product Code
Card Number

A more detailed description of these data items can be found in Appendix A.

4.4.2.3 Processing Logic

All records will be processed by this function and passed to the edit and convert function (4.4.3). The flow chart in Figure 4-4 details the major processing steps of the DEIS I sort function.

4.4.2.4 Output

The output of this function is a file containing sorted records.

4.4.3 Edit and Convert Data

This function will test to ensure that there are three cards (MEA 2,3,4) for each product, test numeric fields, check whether the data were previously edited, check the data for reasonableness, and convert the data to the format required to update the data base.

4.4.3.1 Purpose

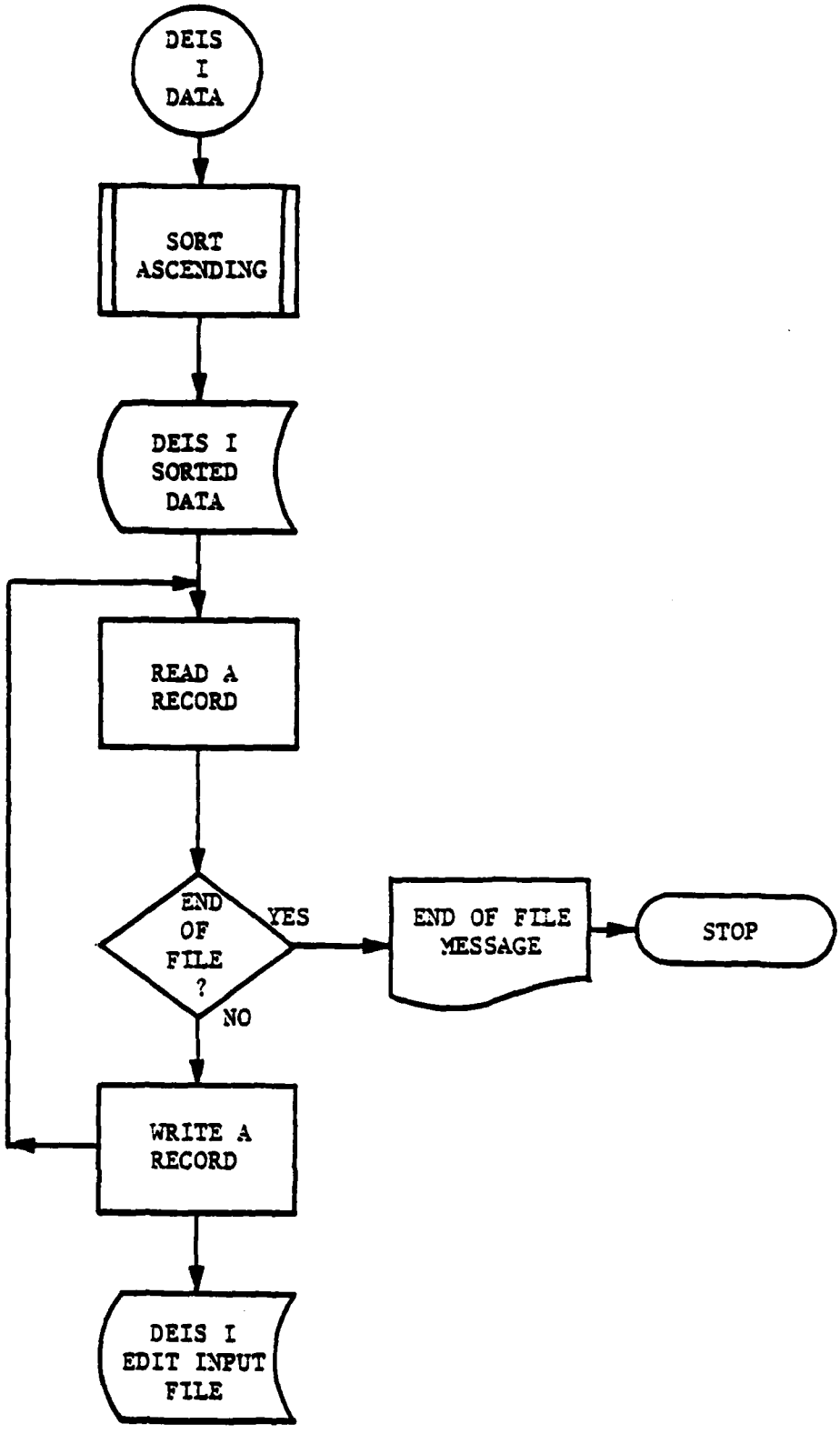
The purpose of this function is to edit/validate DEIS I product information, to produce the Transaction Proof Listing of those records which fail the edit criteria, and to format the data for updating the data base.

4.4.3.2 Data Definition

The data items input to this function are described in more detail in Appendix A. In this section, when the words "product record" appear, they mean all the data contained on the MEA 2,3, and 4 input cards in either card image format or another format.

FIGURE 4-4

DEIS I DATA SORT



4.4.3.3 Processing Logic

A previously edited, revised, and/or correct product record will contain an E in position 79. If this product record fails a second edit, it will be placed on the Rejection File and the Transaction Proof Listing (with a message that the second edit failed). The data from this product record will also be placed on the Accepted Records File so that correct data that fail the edit criteria can still be processed. The following paragraphs specify the edit criteria.

Figure 4-5 provides a flowchart of major processing steps in the data edit and conversion function.

4.4.3.3.1 Common Data Edits

Due to transmission errors, the data may be offset by one column. Some of these errors are recoverable. If the blank is missing or there are two blanks between

- MEA (Card Type) and Card Number,
- Card Number and DoDAAC,
- DoDAAC and Reporting Date, or
- Reporting Date and Product Code,

the blank space will be inserted (or deleted) and the edit process will continue. These card images will be printed as they were submitted on the Transaction Proof Listing with a message that a space was inserted (deleted) and the position (card column) where the change was made. Misalignment in other fields of the input record are not recoverable. The error message for these records will indicate that the blank field is filled (and the card column) at the misalignment.

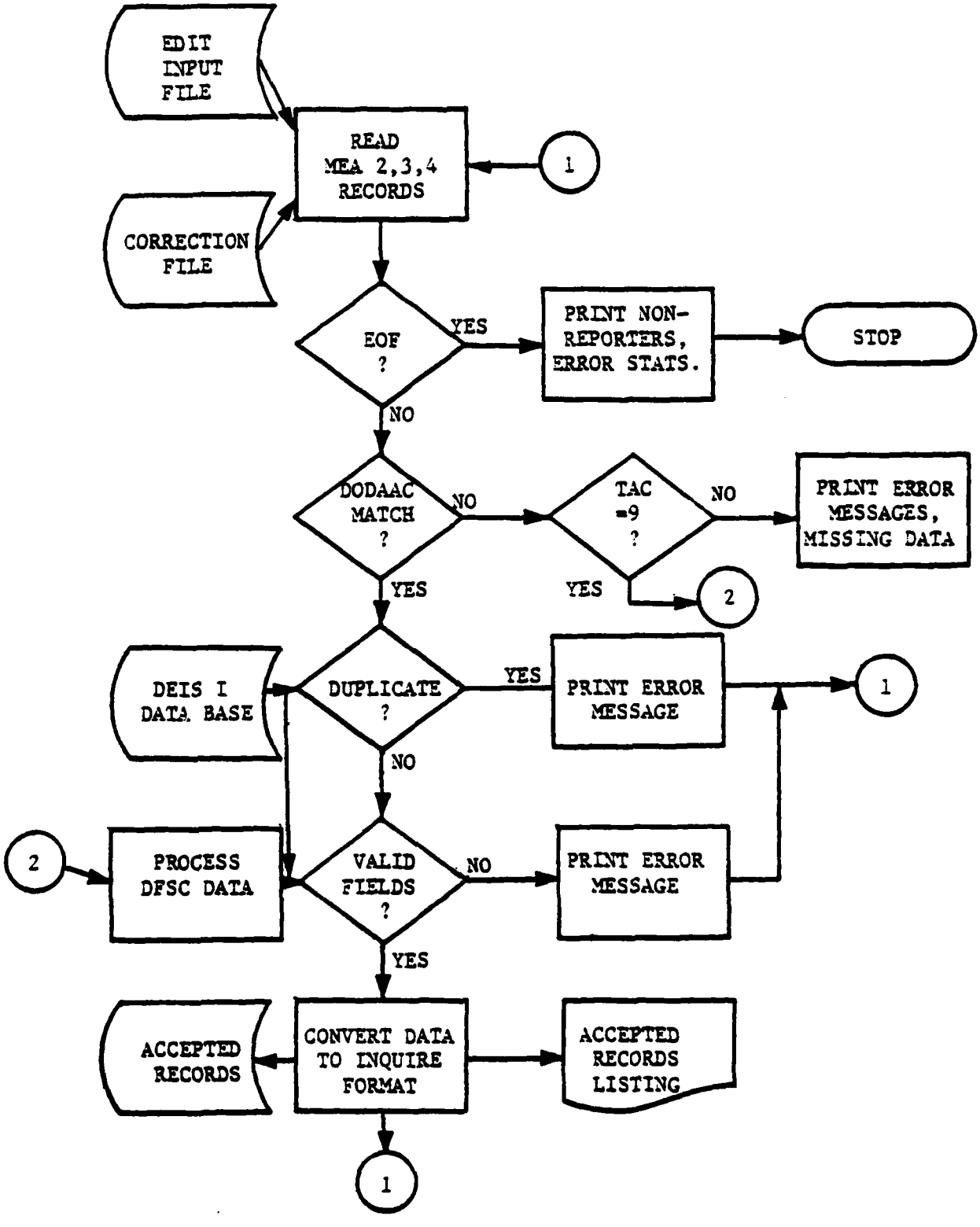
Three data elements are common to the MEA 2, MEA 3, and MEA 4 data formats: DoDAAC, Date, and Product Code. Validation of these three elements is as follows.

The DoDAAC of the MEA 2/3/4 input must match a DoDAAC in the data base. (Before this validation occurs, all DoDAACs beginning with R or V (vessels) on the MEA 2/3/4 input must first be converted to N for comparison purposes.) If the DoDAACs do not match, the record must be indicated with an error message on the Transaction Proof Listing.

The date (MO,YR) of a MEA 2/3/4 triplet must be less than or equal to the date of the period being reported. To facilitate this validation, the correct date may be submitted on a PARM card. If the input date is older than three months, the record/records should be printed with an error message indicating that the change is out-of-date and placed on the Rejection File. If the input date is ahead of the correct date (such as 04,91 when the correct date is 04,81), the area message should indicate an invalid date.

FIGURE 4-5

DEIS I EDIT AND CONVERT DATA



The Product Code on a MEA 2/3/4 card must match acceptable/valid product codes established on the coded information portion of the data base. Before this match is made, however, the following conversion should be accomplished. If the Product Code on the MEA 2/3/4 card is NFD, convert it to NDF. If the Product Code is NFS, convert it to NSF. If the Product Code is DFZ, convert it to DF2. If there is a hyphen in the Product Code, remove it and shift the subsequent fields before the misalignment of the fields is checked.

If, after the above conversion and a match with valid product codes, the Product Code on the input is not valid, print the record on the Transaction Proof Listing with a message such as INVALID PRODUCT CODE and place the record on the Rejection File.

4.4.3.3.2 MEA-Specific Edits

Validation of other data on the MEA-2/3/4 input is summarized in Table 4-4.

Each retail activity reporting will submit a MEA 2, MEA 3, and MEA 4 card for each product reported. The only exception will be the DFSC activities which have only MEA 2 data. For this DFSC (wholesale) data, there is a 9 in column 13. If all three data cards are not input for all other activities, print a message on the Transaction Proof Listing indicating missing MEA 2, MEA 3, or MEA 4 as appropriate. The exception is for data already in the data base. If the card has the same Reporting Date, DoDAAC, and Product Code as a record on the data base for a prior period, it will be treated as a change (see Section 4.4.3.3.3 below).

Upon receipt of MEA 2 data, the following calculation will be made to verify inventory data. Calculate closing book inventory by the following formula: Opening Inventory + Commercial Receipts + DoD Receipts - Issues = Closing Inventory. Compare this calculated inventory to the Closing Inventory (CC 55-61) of the MEA 2. If the difference is more than 1 percent of the calculated Closing Inventory, print a message on the Transaction Proof Listing indicating CLOSING INVENTORY OUT OF BALANCE and place the record on the Rejection File. This verification applies to all activities other than DFSC activities or Navy ships (Region Code = 98, State Code = 98) when both the opening and closing inventories are zero.

Every add transaction (column 80 is blank) will be checked for duplication of either previous reported data in the month, or duplication of a data base record. If the add record duplicates a record type, DoDAAC, Product Code and Reporting Date of a previous add record in the update, an error message indicating DUPLICATE should be reflected. If all 80 columns are duplicated, ignore the second record.

If a record being input matches a record on the data base exactly (all 80 columns), ignore the new record. If an add transaction being input matches a record on the data base on DoDAAC, Product Code, and Reporting Date, print an error message MATCHED ADD. Print this product record error together with the master record. Identify the master record on the listing with a FROM DATA BASE message. Place the input product record on the Rejection File.

All numeric quantity fields on the MEA 2/3/4/ will be validated. If the field is not numeric, print the product record with a message such as FIELD NOT NUMERIC.

TABLE 4-4

DATA EDIT ITEMS

Card	Data Element	Card Column	Validity Checks
MEA 2		22	Blank
	Opening Inventory	23-29	Numeric, equal to last month's Closing Inventory
		30	Blank
	Issues	31-37	Numeric, Positive
		38	Blank
	Commercial Receipts	39-45	Numeric, positive
		46	Blank
	DoD Receipts	47-53	Numeric, positive
		54	Blank
	Closing Inventory	55-61	Numeric, positive
		62-79	Not used by DEIS I
	Action Code	80	Blank or C
MEA 3		22	Blank
	Primary Use	23-28	Numeric, positive
		29	Blank
	Secondary Use	30-35	Numeric, or blank
		36	Blank
	Tertiary Use	37-42	Numeric or blank
		43	Blank
	Downgraded and Losses	44-50	Numeric or blank
		51	Blank
	Aviation Special	52-56	Numeric, positive
		57-79	Not used by DEIS I
	Action Code	80	Blank or C
MEA-4		22	Blank
	Quantity Issued to Service 1	23-27	Numeric
		28	Blank
	Quantity Issued to Service 2	29-33	Numeric
		34	Blank
	Quantity Issued to Service 3	35-39	Numeric
		40	Blank
	Non-DoD Issues	41-45	Numeric or blank
		46	Blank
	Intra-Service Transfers	47-51	Numeric or blank
		52	Blank
	Inter-Service Transfers	53-57	Numeric or blank
		58-79	Not used by DEIS I
	Action Code	80	Blank or C

Match MEA 2, MEA 3, and MEA 4 data cards for a DoDAAC and Product Code. Once matched data are identified, perform the following mathematical verification of Issue Quantity (CC 31-37) of the MEA-2 card.

Add: Quantity of product used: Primary Use (CC 23-28) + Secondary Use (CC 30-35) + Tertiary Use (CC 37-42) + Downgrade and Loss (CC 44-49) from the MEA 3 card.

The Primary Use field must be positive; if it is not, print a message to that effect. If the Tertiary Use field is negative, add it from the Secondary Use field and made the Tertiary Use field zero. If the Secondary Use field is negative, add (the negative amount) to the Primary Use field and make the Secondary Use field zero. Negative numbers will contain an over punch in the last column of the data field.

This quantity of product consumed will then be added to the quantity of product issued to others: (CC 23-27) + (CC 29-33) + (CC 35-39) + (CC 41-45) + (CC 47-51) + (CC 53-57) of the MEA 4.

The combination of consumption and issue data above must equal the Issue Quantity in CC 31-37 of the MEA 2. This applies only to those activities other than DFSC that are required to submit all three data cards.

If the above calculation results in the calculated Issue Quantity not being equal, within 1, to the reported Issue Quantity in the MEA 2, print an error message on the Transaction Proof Listing beside the MEA 2 record. The message should indicate ISSUES OUT OF BALANCE.

If the MEA 2 is input from an activity with an Opening Inventory (CC 23-29) not equal to the Closing Inventory of the prior month's submission, print an error message on the Transaction Proof Listing. This message should indicate INVALID OPENING INVENTORY, the prior Closing Inventory, and the date when that inventory was reported.

All product records in error will be printed on the Transaction Proof Listing and written on the Error File. Product records containing an error will not update the data base unless they have been previously edited and contain an "E" in column 79 (see on-line correction function).

In addition to the error information messages explained above, provide for a message such as REVIEW VALUES. This will apply when a 6- or 7-digit quantity is input in the Issues, Receipts-Commercial or Receipts-From DoD fields of MEA 2.

4.4.3.3.3 Change Transaction Edits

Change transactions (CC 80 = C or a matching record in the data base for a previous reporting period) may be submitted from field activities or by the system operator. These transactions must match a record in the data base on DoDAAC, Product Code and Date. If no match is found, print a message beside the transaction on the Transaction Proof Listing stating UNMATCHED. The entire contents of a card will be submitted for a change of a field on that card. New zero entries will replace existing entries provided that they pass the edits. A set (MEA 2, 3, 4) is not necessary for a change transaction. If

the change matches a data base record, overlay the old data with the new data. This overlay will not, however, be accomplished before all of the validation identified for an add transaction is performed. If the change data fail the edits, reject the new data, print the data as an error on the Transaction Proof Listing, and place it on the Rejection File. Included in the validation of data submitted on a change transaction is the mathematical verification of issues between data on the MEA 2 (issues) and the total of consumption (MEA 3) and issues to others (MEA 4). This procedure is explained in 4.4.3.3 for add transaction validation. If the change data to one of the MEAs (2, 3, or 4) results in this mathematical check being out of balance, the change transaction is rejected and printed with the applicable error message.

The change transaction, if being input to MEA 2 for an activity other than a DFSC activity, must also meet the criterion: Opening Inventory + Commercial Receipts + DoD Receipts - Issues = Closing Inventory, plus or minus 1%. If the resulting record will not meet this check, the change will be made but will print on the Transaction Proof Listing with an error message as indicated in 4.4.3.3.2.

4.4.3.3.4 Delete Transaction Edits

Delete transactions (CC 1-3 = DDD) must match on the DoDAAC, Date, and Product Code. If an exact match does not occur, print the transaction on the Transaction Proof Listing with a message such as UNMATCHED and place the transaction on the Rejection File. If there is an exact match, delete the master record. Beside the transaction on the Transaction Proof Listing, print MASTER DELETED and the data which were deleted.

4.4.3.3.5 Non-Reporting Activities Edits

Those activities (DoDAACs) in the data base for which no data (no MEA cards at all) were received should be printed on the DEIS I Activities Not Reporting listing. A listing will also be provided showing the activities not reporting the same products as reported in the previous months.

The listings will indicate the Region/CINC Code, State/Country Code, Installation Name, Major Command and Service/Agency Code for each DoDAAC. These data will be taken from the coded information file.

Should the activity not reporting be one that has not reported for more than the prior month, print all of the coded information data but leave the Product Code field blank. Since no report in the prior month will be available to determine the missing Product Code, there is no assurance that the activity should report a given product. Should a DoDAAC not report for three consecutive months, print a message such as REVIEW HEADER. Activities not reporting for more than three consecutive months will no longer be printed and will be considered closed or inactive.

For those activities reporting changes in products used, the Product Code will be determined as follows: If no data (MEA 2/3/4) are submitted for a Product Code reported on the previous month report, reflect this unreported product.

The above will apply to all Service/agency activities in the coded information file. DFSC installations (DoDAAC appended by a "9") will have no MEA 3 or

MEA 4 data submissions, and thus they will not be validated and no error message will apply.

4.4.3.3.6 Conversion

Data will be converted from MEA card format to the format required for INQUIRE data base updating.

4.4.3.4 Outputs

There are seven outputs from this function:

1. Records which have passed the data edits and are converted to INQUIRE data base update format will be written on the Accepted Records File (in the data base). As many as 2000 records may pass the data edits at one time.

2. Records which have passed the data edits will be printed on the Accepted Records Listing in DoDAAC order. A sample of this report layout is given in Figure 4-6.

3. Records which fail the data edits will be written on the Rejection File. As many as 1000 records may fail the data edits at one time. Because of this volume, this file should be arranged for selective as well as sequential access.

4. Records which fail the data edits will be printed on the Transaction Proof Listing in DoDAAC order. This listing will contain the images of the records on the Rejection File and the appropriate error messages (specified in 4.4.3.3). Multiple error messages may be printed. A sample of this report layout is also given in Figure 4-6.

5. Activities which did not submit data will be reported on the DEIS I Monthly Activities Not Reporting listing. Page breaks are needed only when the print limitation of the page is reached. The total number of activities not reporting, by MEA type, will be printed at the end of the report. A sample of this report layout is given in Figure 4-7.

6. Activities not reporting the same Product Codes as reported in the prior month will be reported on the DEIS I Activities Reporting Product Changes listing.

   This listing will be developed by comparing data reported for a DoDAAC in the current month to data reported for that same DoDAAC in the prior month. If a DoDAAC reported a product in the prior month, but not in the current month, that DoDAAC and product will be printed on the listing along with the error message NON-SUBMISSION. The type of data not submitted will also be identified, i.e., MEA 2, MEA 3 and/or MEA 4. If a DoDAAC reports a product not reported in the prior month, the line will be printed as above but will be identified as a new submission. Page breaks are needed only when the print limitation of the page is reached. A sample of this report layout is shown in Figure 4-8.

FIGURE 4-6

ACCEPTED RECORDS LISTING

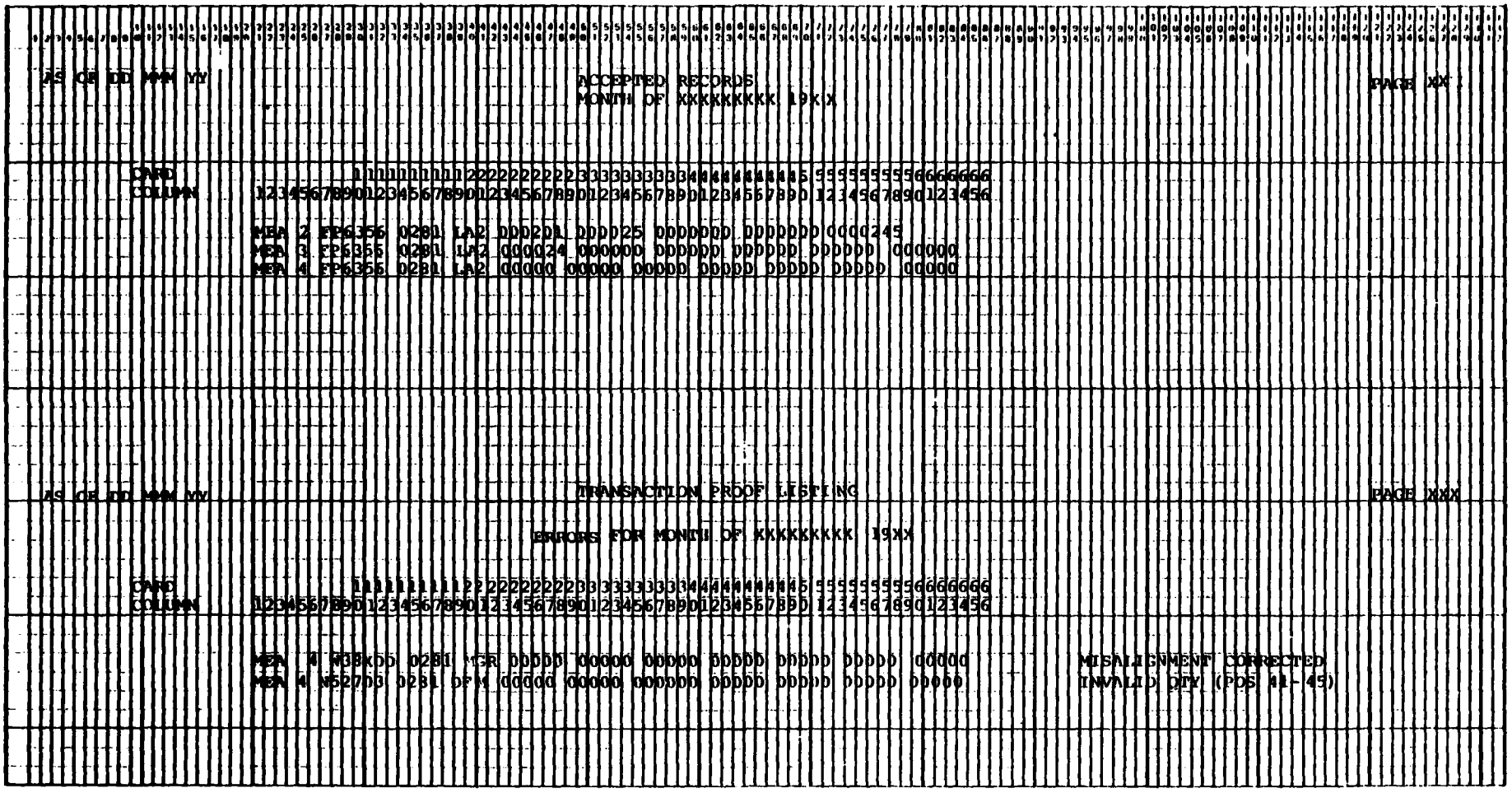


FIGURE 4-7

DEIS I ACTIVITIES NOT REPORTING

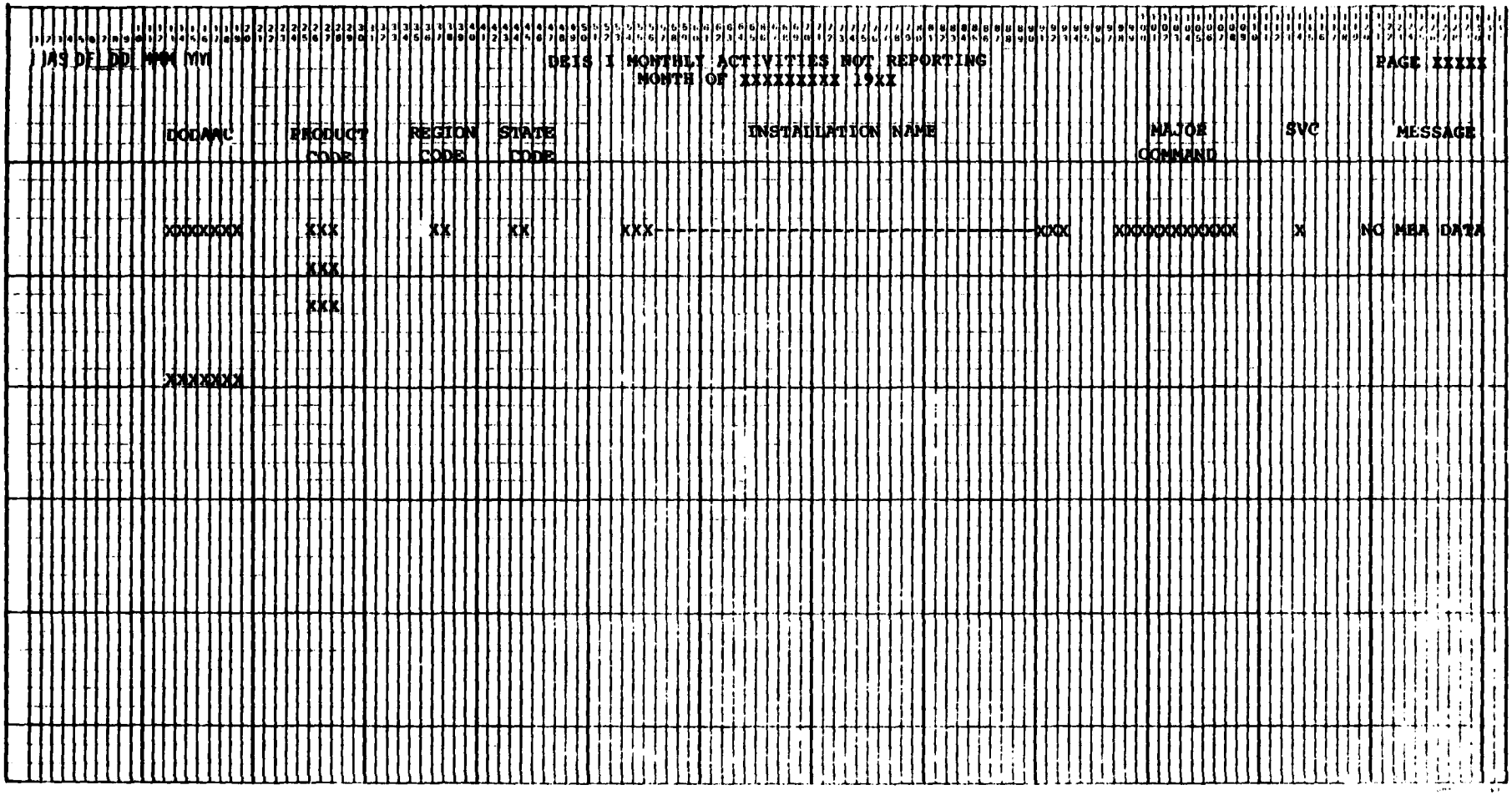
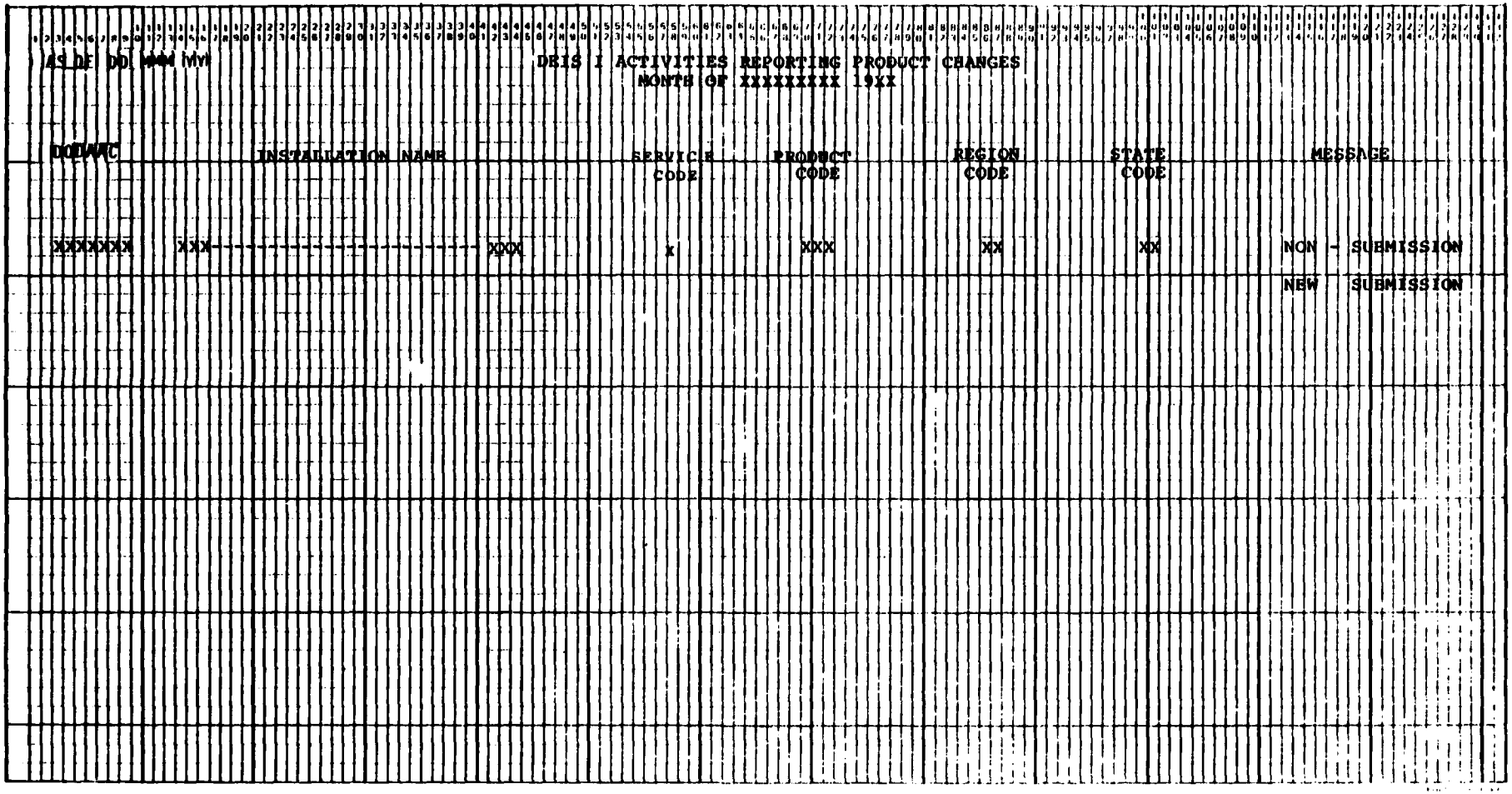


FIGURE 4-8

DEIS I ACTIVITIES WITH PRODUCT CHANGES



7. DEIS I Error Statistics giving the number of times each error message is printed will be printed at the end of each edit run. This listing will be sent to the system operator. A sample of this report layout is given in Figure 4-9.

4.4.4 Update Data Base

This function is performed mainly through the generalized DBMS capabilities and provides for applying records with correct data to the data base. The data base update will occur at least once a month. Since there will usually be late reporters and changes, the update will probably occur two or three times each month.

4.4.4.1 Purpose

The purpose of this function is to add, change, and delete data in the data base. This includes the ability to add new data fields or delete existing ones by reorganizing the data base. Fields will be added or deleted infrequently and only after consultation with AFDSC. Records with data items found to be in error during the update will be placed on the Rejection File, for on-line editing of the error records.

4.4.4.2 Data Definition

The data items input to this function are shown in Table 4-5. A more detailed description of each data item can be found in Appendix A.

4.4.4.3 Processing Logic

Those records that passed the edits described in 4.4.3 will be applied to the DEIS I data base in batch mode by means of the DBMS. The input records will be saved as a transaction log. Any data rejected by INQUIRE at this stage will also be placed on the Rejection File for subsequent data correction.

4.4.4.4 Output

The outputs of this function are an updated DEIS I data base and the Rejection File. The data to be written on the Rejection File may be converted to MEA card image format for ease of user correction. The error messages will also be placed on the Tranaction Proof Listing.

4.4.5 Maintain Tables

Part of the DEIS I data base will contain clear text for coded data and distribution lists for each report. Maintenance of these tables will be controlled through AFDSC.

4.4.5.1 Purpose

This function will provide for maintenance of tables to translate a DoDAAC to its Installation Name and to translate Service Codes, Product Codes, Major Command Codes, Region/CINC and State/Country Codes. These codes ensure that when summaries by major command, region, state, or Service are required, the appropriate accumulations can be performed. Maintenance of distribution lists

FIGURE 4-9

DEIS I ERROR STATISTICS

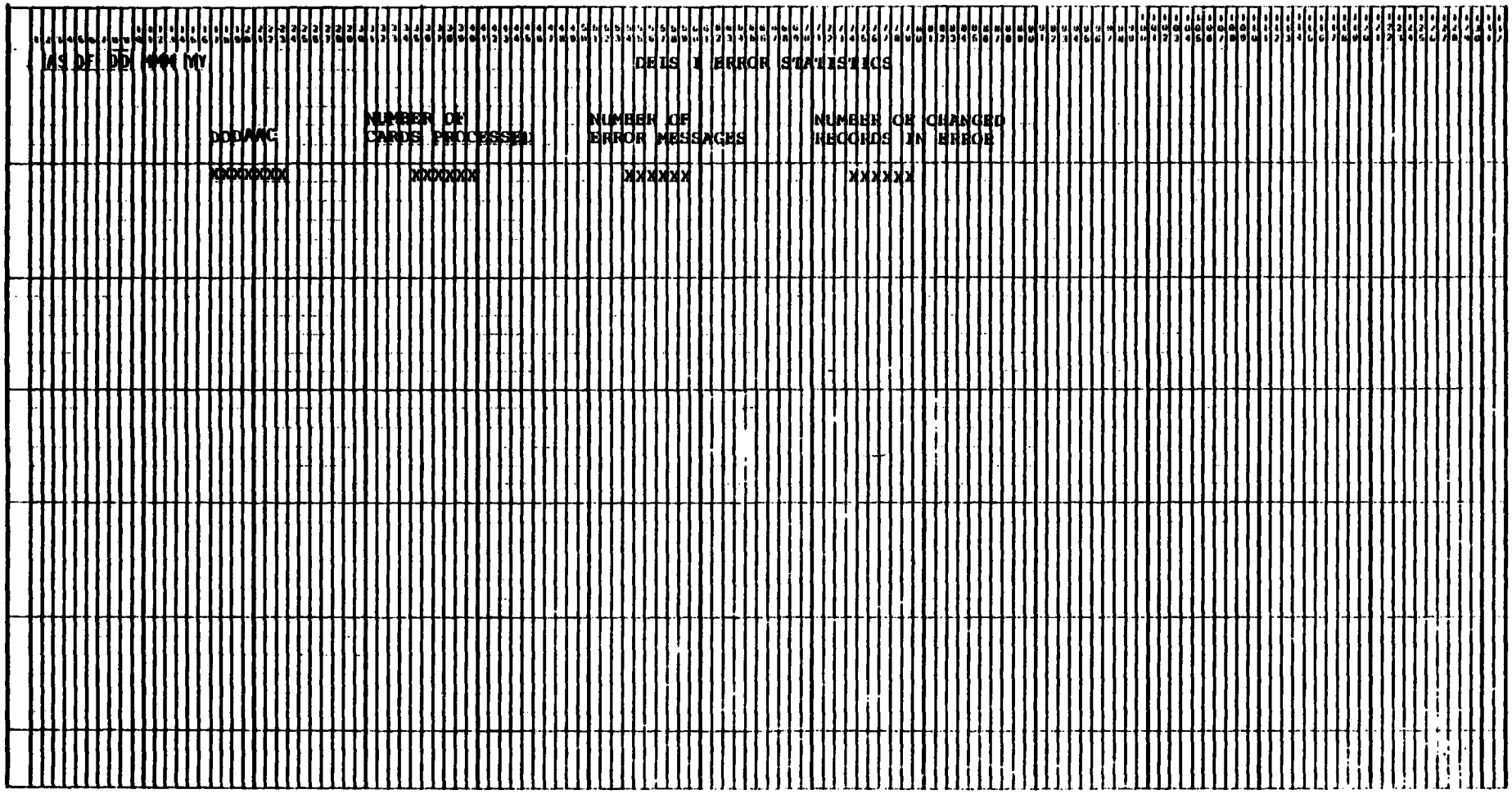


TABLE 4-5

DATA BASE UPDATE DATA ITEMS

Data Dictionary Element Number	Element Name	Comments
9	DODACC	
29	RPTDATE	Reporting Date (Month, Year)
21	PRODCODE	Product Code
19	OPENINV	Opening Inventory
15	ISSUES	
4	COMMER	Commercial Receipts
11	DODRCPT	DoD Receipts
3	CLOSINV	Closing Inventory
22	PRIMARY	Primary Use
30	SECOND	Secondary Use
39	THIRD	Tertiary Use
5	CONSUM	Total Consumption
16	LOSSD	Downgraded and Losses
1	AVIATION	Aviation Special, Credit Cards, Form 15/44, Into-Plane
23	QUAN1	Quantity Issued to Service 1
24	QUAN2	Quantity Issued to Service 2
25	QUAN3	Quantity Issued to Service 3
12	INTERTRAN	Interservice Transfers
18	NONDOD	Non-DoD Issues
13	INTRATRAN	Intraservice Bulk Transfers
7	DTEUP	Date of Update
6	CORRECT	Correction Code
33	SERVICE3	Service Use MEA 3
34	SERVICE4	Service Use MEA 4

for each of the DEIS I reports on this file will help ensure that all persons receive their reports promptly.

4.4.5.2 Data Definition

The data items maintained by this function are input on-line. A more detailed description of each data item is shown in Appendix A. The current DEIS maintains a Header File on magnetic tape that contains DoDAAC-related data. Table 4-6 gives the layout of this tape. The record length is 80, and the blocking factor is 20. The tapes are 7 track, unlabelled, 800 BPI.

4.4.5.3 Processing Logic

Queries, translations, and updates to that part of the DEIS I data base containing coded information are supported through AFDSC.

Table 4-7 contains the edit criteria used for adding new data or validating changes to existing data. A DoDAAC is never deleted from the file, but it may be marked as inactive. Ships may become inactive when they are drydocked. The system operator may insert an expected date of return to service for these DoDAACs. To inactivate coded information about an installation, the DoDAAC must match one on the file. Table 4-8 contains translations of Region Codes and State/Country Codes. Table 4-9 contains translations of Service/Agency Codes. Product Code translations are in Table 4-10. Distribution Codes are in Table 4-11.

Actual update of the data base need not be completed on-line. An on-line update will be included in the macros, as a user option, since timely reports are a system requirement and correct codes are needed before any reports are run. Figure 4-10 shows the major processing steps of this function.

4.4.5.4 Outputs

Outputs from this function are updated coded information tables. In addition, on request through the user macro, a copy of any category of coded information (data elements in Table 4-7) may be requested. At the user's option, the output from this request may be printed or displayed at the user's terminal or directed to a printer at AFDSC for mailing to the user. Listings by Installation Name will be arranged in alphabetical sequence by installation and will contain the following fields:

Installation Name
Major Command
DoDAAC
Service/Agency Code
Region Code
State/Country Code

Listings by DoDAAC will be in alphabetical sequence by DoDACC and will contain the fields listed above, DoDAAC being printed first on the line rather than Installation Name. For both of these reports, one line will be skipped when the first letter in the Installation Name changes.

TABLE 4-6

HEADER FILE DATA LAYOUT

DATA NUMBER	DATA ELEMENT DESCRIPTION	HEADER FILE POSITION	COMMENTS/ VALUE
NA	Document Identifier	1-3	MEA
	Blank	4	
NA	Card Code	5	1
	Blank	6	
9	DoDAAC	7-12	
38	TAC	13	9 or blank
	Blank	14	
28	Region Code	15-16	
	Blank	17	
37	State Code	18-19	
	Blank	20	
14	Installation Name	21-60	
17	Major Command	61-70	
	Blank	71-78	
32	Service Code	79	
10	DoDAAC Delete Code	80	blank or "D"

TABLE 4-7

CODED DATA BASE ITEMS

Data Element Number	Data Element Description	EDIT Criteria/Comments
9	DoDAAC	Cannot be blank or zero. Must match a DoDAAC in the file.
10	DoDC	D or blank, DoDAAC delete code
38	TAC	9 or blank
28	Region Code	Cannot contain blanks or be zero. Must match a code in Table 4-6. Two characters long.
37	State/Country Code	Cannot contain blanks or be zero. Must match a code in Table 4-6. Two characters long.
14	Installation Name	Cannot contain only blanks.
17	Major Command	Cannot contain only blanks.
32	Service/Agency Code	Must be A, B*, F, H**, N, M, D, S, or T.
35	Shipdate	Blank or numeric; month, year ship is to be returned to service
21	Product Code	Cannot contain blanks or zeros. Must match a code in Table 4-8. Three characters long.
8	Distribution Code	Cannot contain blanks or zeros. Table 4-9 contains the valid codes and their translations.

* This code is G on the existing Header File and must be converted to B.

** This code is V on the existing Header File and must be converted to H.

TABLE 4-8

REGION/STATE/COUNTRY CODES*

REGION/CINC	REGION CODE	STATE/COUNTRY CODE
REGION 1	01	
Connecticut	01	09
Maine	01	23
Massachusetts	01	25
New Hampshire	01	33
Vermont	01	50
Rhode Island	01	44
REGION 2	02	
New Jersey	02	34
New York	02	36
REGION 3	03	
Delaware	03	10
District of Columbia	03	11
Maryland	03	24
Pennsylvania	03	42
Virginia	03	51
West Virginia	03	54
REGION 4	04	
Alabama	04	01
Florida	04	12
Georgia	04	13
Kentucky	04	21
Mississippi	04	28
North Carolina	04	37
South Carolina	04	45
Tennessee	04	47
REGION 5	05	
Illinois	05	17
Indiana	05	18
Michigan	05	26
Minnesota	05	27
Ohio	05	39
Wisconsin	05	55

* The region table will have the region code and the region/CINC name. The state table will have the state code, the region code and the state name.

TABLE 4-8 (Cont.)

REGION/CINC	REGION CODE	STATE/COUNTRY CODE
REGION 6	06	
Arkansas	06	05
Louisiana	06	22
New Mexico	06	35
Oklahoma	06	40
Texas	06	48
REGION 7	07	
Iowa	07	19
Kansas	07	20
Missouri	07	29
Nebraska	07	31
REGION 8	08	
Colorado	08	08
Montana	08	30
North Dakota	08	38
South Dakota	08	46
Utah	08	49
Wyoming	08	56
REGION 9	09	
Arizona	09	04
California	09	06
Nevada	09	32
REGION 10	10	
Idaho	10	16
Oregon	10	41
Washington	10	53
CINCs		
CANADA & GREENLAND	**	
Western Canada	3X	CA
Argentia, Eastern Canada	3D	CA
Greenland	3E	GL
CINCAL		
Alaska	1A	02
Aleutian Islands	1B	02

** When multiple codes appear in a CINC, each code will have its own region name.

TABLE 4-8 (Cont.)

REGION/CINC	REGION CODE	STATE/COUNTRY CODE
CINCSOU		
Canal Zone	6A	PO
Easter Island (Chile)	6A	CI
CINCEUR		
Crete (Greece)	4Q	GR
Cyprus	4Q	CY
France	4M	FR
Germany	4K	GE
Italy	4P	IT
Malta	4S	MT
Morocco	4R	MO
Belgium	4K	BE
Netherlands	4K	NL
Norway	4J	NO
Sardinia	4P	SD
Sicily	4P	SI
Spain	4N	SP
Portugal	4N	PO
Turkey	4Q	TU
United Kingdom (Great Britain & Northern Ireland, including Channel Islands)	4L	UK
MISCELLANEOUS		
Ceylon	7F	CE
Eritrea (Ethiopia)	7C	ET
Lebanon	7D	LE
Saudi Arabia	7D	SA
CINCLANT		
Ascension Island	2R	SH
Sxotrd	2K	AZ
Bermuda	2D	BD
Cuba	2C	CU
Iceland	2H	IC
Puerto Rico	2C	RQ
Virgin Islands	2C	VQ
West Indies--includes		
Leeward Islands	2C	LW
Windward Islands	2C	WI
French West Indies	2C	FW
Jamaica	2C	JM
Dominican Republic	2C	DR
Haiti	2C	HA
Netherlands West Indies	2C	NA
Trinidad	2C	TD

TABLE 4-8 (Cont.)

REGION/CINC	REGION CODE	STATE/COUNTRY CODE
CINCPAC		
Australia	5E	AS
Diego Garcia	5S	MR
Hawaii	5N	15
Japan	5H	JA
Johnston Island	5N	JO
Korea	5H	KS
Laos	5D	LA
Marianas Islands	5G	MS
Marshall Islands (Pacific Islands)	5B	TQ
Midway Island	5N	MQ
New Zealand	5V	NZ
Philippines	5C	RP
Ryukyu Islands	5H	YQ
Samoa Islands	5F	AQ
Taiwan	5C	TW
Volcano Islands	5G	BJ
Wake Island	5B	WQ
South Vietnam	5D	VS
Thailand	5D	TH
Malaysia	5D	MY
Singapore	5D	SN
Vessels	98	98

TABLE 4-9

SERVICE/AGENCY CODES

Code	Translation*
A	Army
B	Army National Guard
F	Air Force
H	Air National Guard
N	Navy
M	Marine Corps
D	DFSC
S	DLA
T	Other DoD Agencies

* When summarizing Army, include both "A" and "B"
When summarizing Air Force, include both "F" and "H"

TABLE 4-10

PRODUCT CODES

Aviation Gasoline*	Distillates
130	DFM
131	DFW
135	DF1
145	DF2
887	DFA
996	DFB
	NDF
Jet Fuel - JP4	DFS
JP4	**Fuel Oil Distillates**
JR1	
JAA	FS1
JAB	FS2
JTS	KSN
JA1	KSD
Jet Fuel - JP5	**Fuel Oil Residuals**
JP5	FS4
JR2	FS5
	FS6
Jet Fuel - JP8	FSL
JP8	**Lubricating Oils**
Residuals	LA2
NSF	**Gasohol**
Automotive Gasoline	GUS
	GUP
MG1 MUR	GUR
MG2 MUP	
MGP MLL	**Slop**
MGR MLP	
MGU MLR	SLP
MUS	
	Other
	SII

*Each product code has a Product Category name associated with it.

TABLE 4-11

DEIS I REPORT DISTRIBUTION CODES

Code	Report Name	Report Recipients
	Monthly	
1M01	Installation Summary*	(a)
1M02	Air Force Detail Summary	OASD(MRA&L), Air Force
1M03	Army Detail Summary	OASD(MRA&L), Army
1M04	Navy Detail Summary	OASD(MRA&L), Navy
1M05	MC Detail Summary	OASD(MRA&L), Marine Corps
1M06	DLA Detail Summary	OASD(MRA&L), DLA
1M07	DoD Detail Summary (DIS, DNA)	OASD(MRA&L), DIS, DNA
1M08	DFSC Detail Summary	OASD(MRA&L), DFSC
IM09	Activities Not Reporting	OASD(MRA&L), DFSC-CB
1M10	Activities Reporting Product Changes	OASD(MRA&L), DFSC-CB
1M11	Petroleum Product Summary**	(b)
1M12	Consumption Summary	(b)

(a) DFSC, Naval War Research Center/Stanford Research Institute (NWRC), OJCS, Atlantic Command, Panama Canal (Navy), USEUCOM, DALO-TSE-A, AFLGY/F, OASD(MRA&L), USAGMPA, AFDSC, Naval Ship R&D Center.

(b) DFSC-CE, AFLGY/P, AFBCC, AFCOS/LGRX, OASD(MRA&L), DA, USAGMPA, CINCPAC, CNET, CINCLANT, CINCEUR, CNO OP-41, NWRC, USMC(HQ), DNA, DLA-WS, USAMSSA, Naval Ship R&D Center

* Includes the following reports (in sequence):

Cumulative Worldwide Category Summary; Cumulative Worldwide Summary Report; Cumulative CONUS Summary Report; Monthly Worldwide Category Summary; Monthly Worldwide Summary Report, Monthly CONUS Summary Report; Monthly Summary by DOE Region/CINC, Region Summary Totals; Monthly Summary by DOE Region/CINC, Vessel Summary Totals; Monthly Summary by DOE Region/CINC, State Summary Totals; and Monthly Installation Summary. As for monthly overall summaries, a separate report is provided for each Service/Agency.

** As for the Overall Summary reports, a separate report is provided for each Service/Agency.

TABLE 4-11

DEIS I REPORT DISTRIBUTION CODES (Continued)

Code	Report Name	Report Recipients
	Quarterly	
1Q01	Installation Summary*	(c)
1Q02	Consumption Summary	OASD(MRA&L), Services, Agencies
1Q03	Army Consumption Detail & Summary	OASD(MRA&L), Army
1Q04	Air Force Consumption Detail & Summary	OASD(MRA&L), Air Force
1Q05	Navy Consumption Detail & Summary	OASD(MRA&L), Navy
1Q06	Marine Corps Detail & Summary	OASD(MRA&L) Marine Corps
1Q07	DLA Detail & Summary	OASD(MRA&L), DLA
1Q08	DoD Detail & Summary (DIS, DNA)	OASD(MRA&L), DIS, DNA
1Q09	DFSC Detail & Summary	OASD(MRA&L), DFSC
1Q10	Conservation Performance Report	OASD(MRA&L), Services, Agencies
1Q11	Petroleum Product Summary	OASD(MRA&L), Services, Agencies

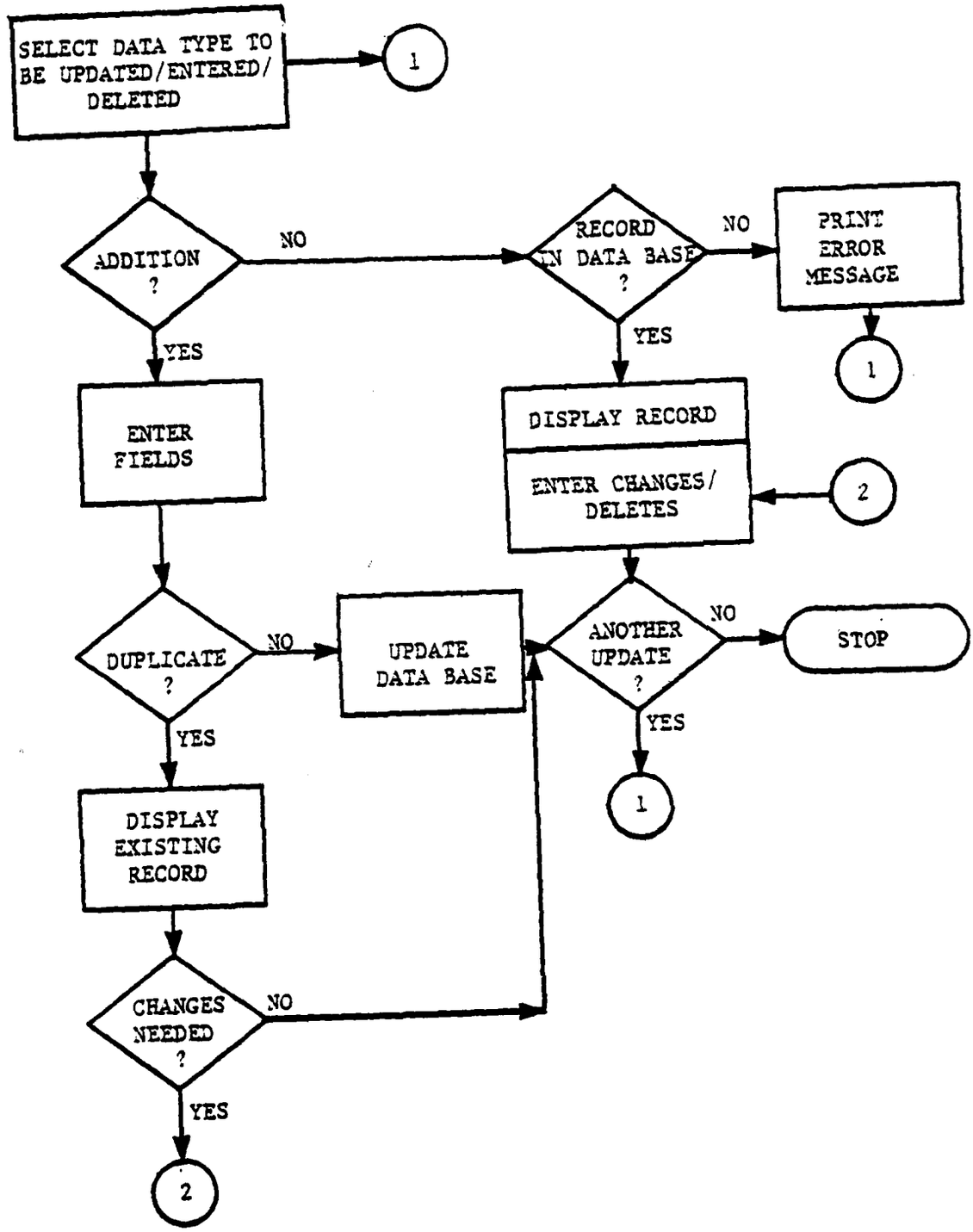
(c) DFSC-CB, OASD(MRA&L), AFLGY/F, DA(DCS/L), USAGMPA, CINCPAC, CINCLANT, CINCEUR, CNO OP-41, NWRC, USMC(HQ), DAL-O, OJCS, Naval Facilities Engineering Command

* Includes the following reports (in sequence):

Quarterly Worldwide Category Summary; Quarterly Worldwide Summary Report; Quarterly CONUS Summary Report; Quarterly Summary by DOE Region/CINC, Region Summary Totals; Quarterly Summary by DOE Region/CINC. Vessel Summary Totals; Quarterly Summary by DOE Region/CINC. State Summary Totals; and Quarterly Installation Summary.

FIGURE 4-10

MAINTAIN DEIS I DATA



Listings of the other codes will be in the order specified in Tables 4-8 through 4-11. For all the reports, page breaks are required only when the page limit is reached.

4.4.6 Perform On-Line Data Entry of Corrections

This function is performed only through the system operator (DFSC-CB). The system operator will have both a hard copy listing of the records in error (with an error message) and access to the Rejection File. The Rejection File will be in the same order as on the hard copy, but processing may begin at any point in the file. All errors or questionable data from the edit and convert data and data base update functions will be on one Rejection File. Records which are changed (or marked as changed) during the correction process will contain a "C" in column 79 of each card image believed to be in error. All records will undergo subsequent reediting, and those card images containing an "E" in column 79 will update the data base even if the edit fails (as specified in 4.4.4). Records can be completely deleted or added through this function.

4.4.6.1 Purpose

This function provides an easy-to-use, fast method to correct errors or add records and submit the corrected data for further processing. Multiple users (three or four) may be correcting different segments of data on the Rejection File at the same time. (Corrections are now done by Service). The capability of concurrent updating of the Correction File(s) must exist for the system operato..

4.4.6.2 Data Definition

The data items input to this function usually are the MEA card images described in Table 4-3 and in Appendix A. Data relating to bulk transfers and sales by DFSC are also processed by this function. Data items for DFSC activities are the same as the MEA 2 data shown in Table 4-3.

4.4.6.3 Processing Logic

All records in error will be on the Rejection File. Each record selected will be displayed for the system operator to correct, to mark as correct with an "E", or to leave unmarked so that further editing may again reject the record. All corrected records from the Rejection File will be placed on the Correction File. The data in the Rejection File are then deleted so that data from subsequent editing will be the only data on the Rejection File. Figure 4-11 gives the major processing steps of this function.

4.4.6.4 Output

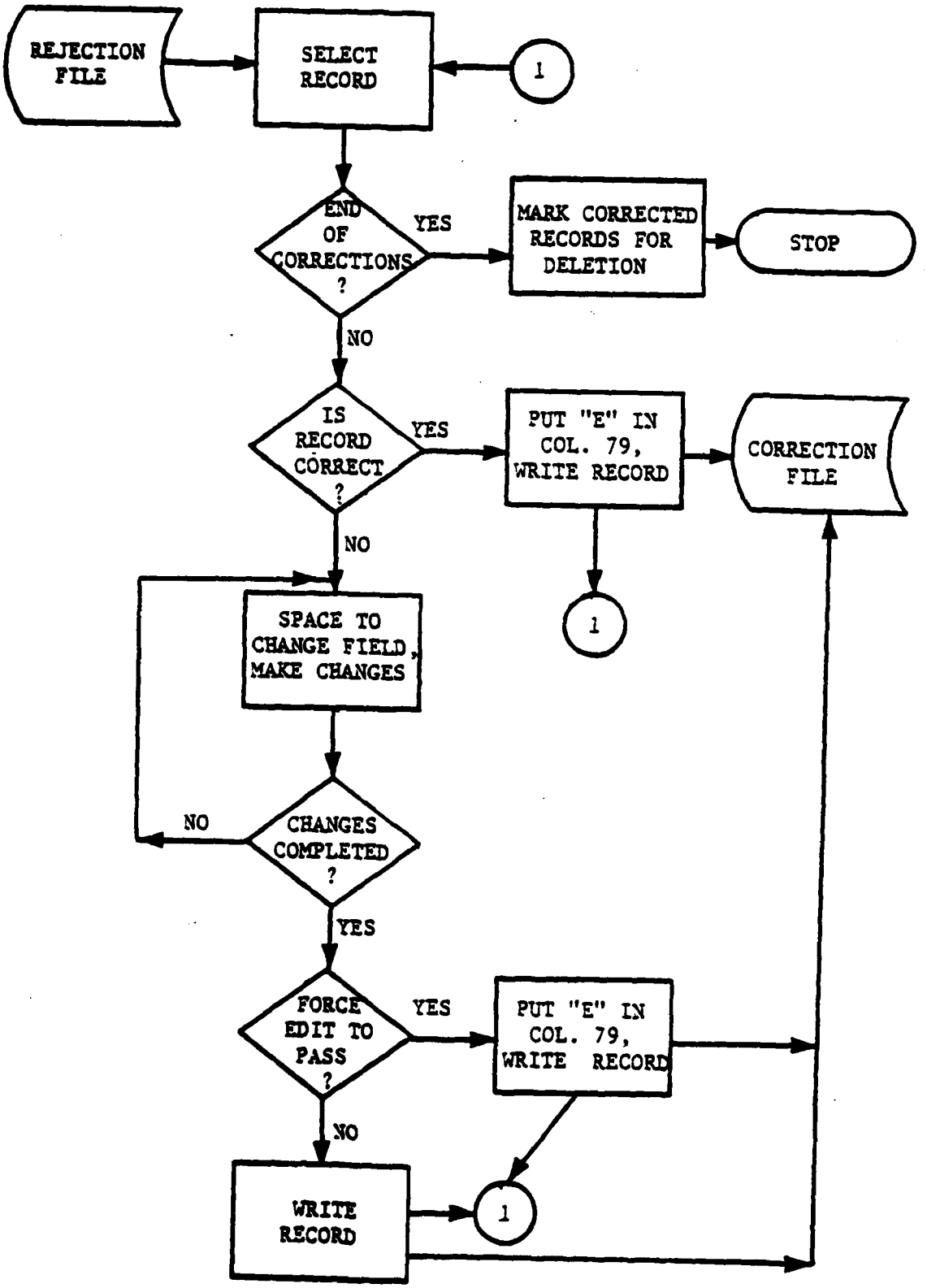
The output of this function is a Correction File(s) of MEA format records and other input records. The data on this file are described in 4.4.6.2.

4.4.7 Archive Data Base

After the time-sensitive processing of DEIS I data is complete, data base maintenance in the form of archiving will be performed. This archiving entails creating quarterly summaries for data older than 13 months and deleting

FIGURE 4-11

DEIS I ON-LINE CORRECTIONS



detail data no longer needed on-line from the data base. Figure 4-12 shows a schema of the data base before and after archival.

4.4.7.1 Purpose

The archival process provides a method for keeping all needed DEIS I data on-line without overloading the data base to the point where processing time and data storage requirements are excessive. Monthly detail data are needed for the baseline (1975) and for the most recent 13-month period. Quarterly summary data are kept for the 5 years prior to the most recent 13-month period. Data deleted from the on-line data base will be kept off-line in a format that allows easy creation of a data base for the specified time period. After monthly data have been archived, only the quarterly (on-line) data will be updated. In addition, this function will supplement AFDSC procedures to back up the on-line data base.

4.4.7.2 Data Definition

Data items used in this function include the date (for selection purposes) and all data elements in the data base. The data are transferred to off-line storage and deleted from on-line storage. First, however, new quarterly totals are calculated by summing all the fields in the data base for a given DoDAAC (Command, Service, Region, and Country fields are fixed identification fields) and a given 3-month period (quarter). The data items are described in Appendix A.

4.4.7.3 Processing Logic

If the data to be placed in archival storage are for a month at the beginning of a quarter, quarterly data for that quarter will be developed by adding all fields (except for identification fields). The reporting date/month field will be changed to reflect Q1, Q2, Q3, or Q4 of the fiscal year. The monthly data items for that DoDAAC can then be written to the archival file and deleted from the on-line data base. If the data to be placed in archival storage are not for the first month of a quarter, or if quarterly data are to be taken off-line, the data will simply be copied to archival storage and deleted from the on-line data base. Five years of quarterly data will be maintained in the on-line data base and then quarterly data will also be archived. It is expected that INQUIRE facilities will be used for this function so that creating an INQUIRE data base containing those months or quarters of the archival data can be completed with a minimum of trouble. The request procedure for restoring archival data will be contained in the DEIS user's manual. Figure 4-13 shows the major processing steps of this function.

4.4.7.4 Outputs

The output of this function is an updated data base and an INQUIRE format archival file of the records purged.

4.4.8 Preformatted Reports

This function will produce all the existing regular DEIS I reports. The reports may be prepared through the host language interface with the DBMS.

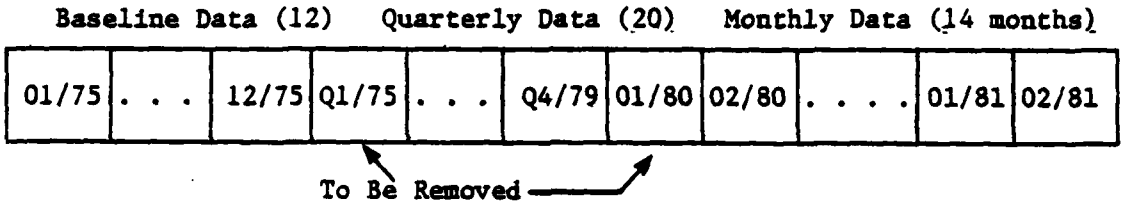
FIGURE 4-12

SCHEMA OF DB BEFORE AND

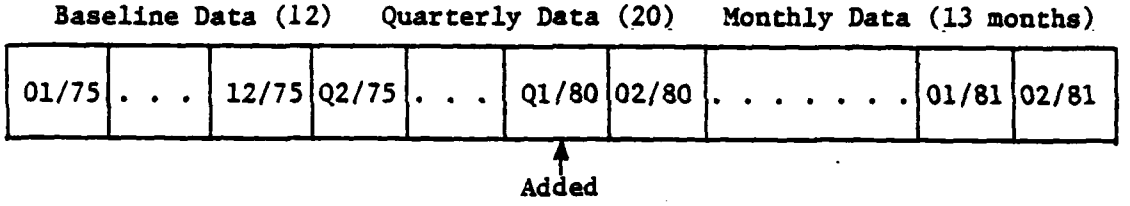
AFTER ARCHIVAL

Case 1--Data to be archived are for a month at the beginning of a quarter--done after update for month 2 of a quarter.

Before

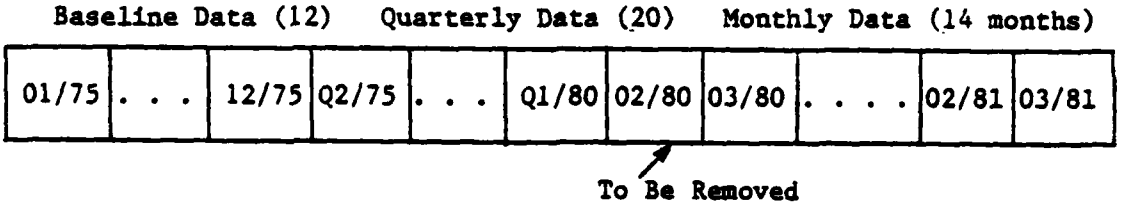


After



Case 2--Data to be archived are for a month not at the beginning of a quarter--done after update for month 1 or 3 of a quarter.

Before



After

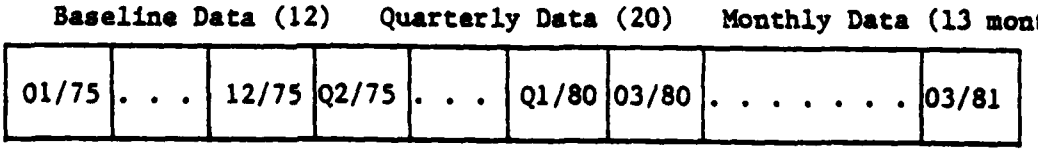
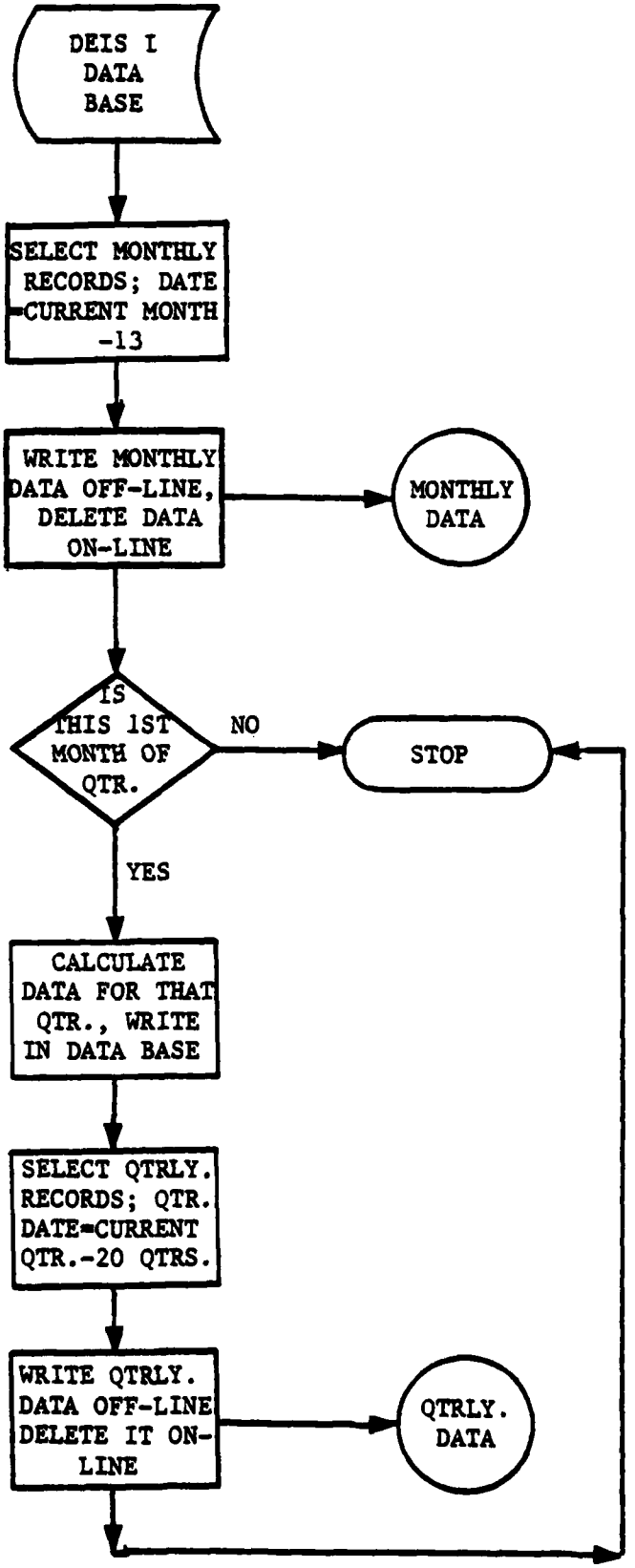


FIGURE 4-13

ARCHIVE DEIS I DATA BASE



4.4.8.1 Purpose

DEIS I preformatted reports include all the regularly scheduled reports used by DEIS users. As new reports or changes to existing reports are identified, reports run for regular distribution to one or more persons may be specified as preformatted. Ad hoc reports that become regularly scheduled may be reprogrammed by means of the host language interface to save processing costs.

4.4.8.2 Data Definition

All fields contained in the data base (see Appendix A) are used in producing the reports. Except for some code translation and totals in some fields, data from the data base are printed on reports unchanged.

4.4.8.3 Processing Logic

The processing logic for each report is provided in the following paragraphs. A list of all product codes and their translations will be provided on a separate page at the beginning of each set (booked) of reports, along with definitions of primary, secondary, and tertiary product uses for each Service. Figure 4-14 shows a sample of this header page.

4.4.8.3.1 Monthly, Quarterly, and Cumulative Consumption Summaries

The DEIS I Monthly, Quarterly, and Cumulative Consumption Summaries report product and Service consumption data for a specified month, quarter, or fiscal year-to-date. These reports require reference to the DEIS I data base, coded information, and some calculations.

Table 4-12 lists the data elements reported on the consumption reports and their sources. For purposes of these reports, all consumption data reported by an individual Service or agency for a specific Product Code will be summarized on one line of the report. The major sequence of the report is by Product Code. Services and agencies are listed within each Product Code. In addition, major command totals are given for each Service. Figures 4-15, 4-16, and 4-17 show the report layout for the monthly, quarterly, and fiscal year-to-date consumption reports. There is a subtotal for each product for each Service Code, as well as a grand total for the report. The sum of all the Total Consumptions for each product must equal the sum of all the detail consumptions (Primary, Secondary, Tertiary, and Aviation). The same verification will be done for the grand total. At the beginning of these reports, category summary pages will be printed. The product categories shown in Table 4-10 will be summarized for each Service.

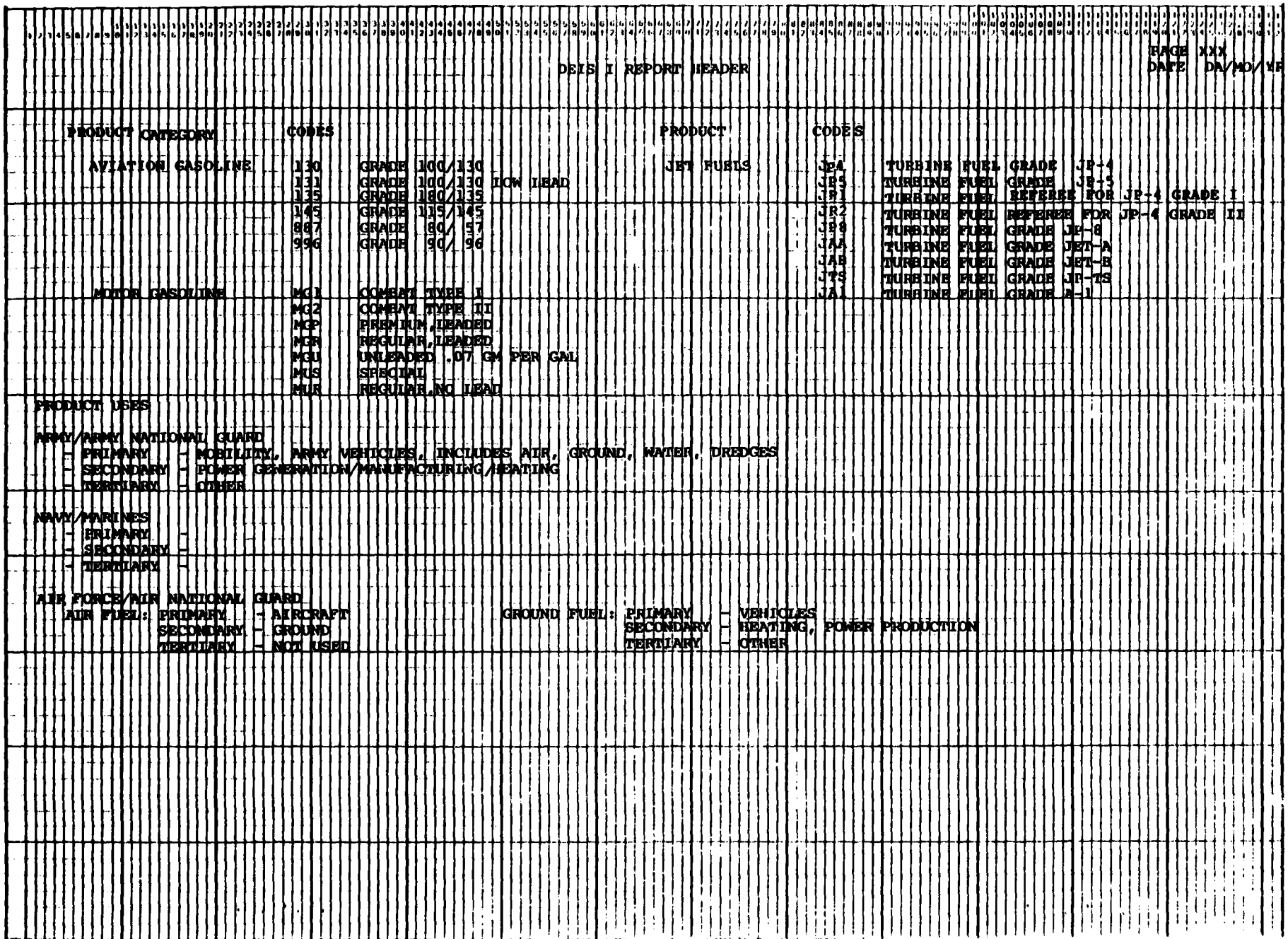
The following paragraphs explain the calculation of the Received From columns of the report, which differ according to the Service or agency being summarized.

If the Army is being reported, the first Received From column (Quantity Issued Service 1) will be Air Force, the second (Quantity Issued 2) will be Navy, and the third (Quantity Issued 3) will be Marines.

If the Navy is being reported, the first Received From column will be Army, the second Air Force, and the third Marines.

FIGURE 4-14

DEIS I REPORT HEADER



DEIS I REPORT HEADER

PAGE XXX
DATE DA/MO/YR

PRODUCT CATEGORY	CODES	
AVIATION GASOLINE	130	GRADE 100/130
	131	GRADE 100/130 LOW LEAD
	135	GRADE 100/135
	145	GRADE 115/145
	867	GRADE 80/ 87
	996	GRADE 90/ 96
MOTOR GASOLINE	MG1	COMBAT TYPE I
	MG2	COMBAT TYPE II
	MGP	PREMIUM,LEADED
	MGR	REGULAR,LEADED
	MGU	UNLEADED .07 GM PER GAL
	MUS	SPECIAL
	MUR	REGULAR,NO LEAD

PRODUCT	CODES	
JET FUELS	JPA	TURBINE FUEL GRADE JP-4
	JP5	TURBINE FUEL GRADE JP-5
	JP1	TURBINE FUEL REFEREE FOR JP-4 GRADE I
	JP2	TURBINE FUEL REFEREE FOR JP-4 GRADE II
	JP8	TURBINE FUEL GRADE JP-8
	JAA	TURBINE FUEL GRADE JET-A
	JAB	TURBINE FUEL GRADE JET-B
	JTS	TURBINE FUEL GRADE JP-TS
	JA1	TURBINE FUEL GRADE A-1

PRODUCT USES

ARMY/ARMY NATIONAL GUARD
- PRIMARY - MOBILITY, ARMY VEHICLES, INCLUDES AIR, GROUND, WATER, DREDGES
- SECONDARY - POWER GENERATION/MANUFACTURING/HEATING
- TERTIARY - OTHER

NAVY/MARINES
- PRIMARY -
- SECONDARY -
- TERTIARY -

AIR FORCE/AIR NATIONAL GUARD
AIR FUEL: PRIMARY - AIRCRAFT
SECONDARY - GROUND
TERTIARY - NOT USED

GROUND FUEL: PRIMARY - VEHICLES
SECONDARY - HEATING, POWER PRODUCTION
TERTIARY - OTHER

TABLE 4-12

CONSUMPTION REPORT DATA

Data Element Number	Data Element Description	Source
21	Product Code	Data base (DB)
31	Service/Agency	DB and decoded for printout
22	Primary	DB, accumulated
30	Secondary	DB, accumulated
39	Tertiary	DB, accumulated
1	Aviation	DB, accumulated
23	Quantity Issued Service 1	DB, accumulated by Service use Alias - Received From Field 1
24	Quantity Issued Service 2	DB, accumulated by Service use Alias - Received From Field 2
25	Quantity Issued Service 3	DB, accumulated by Service use Alias - Received From Field 3
5	Total Consumption	DB, accumulated
2	Average Daily Consumption	Calculated, Total Consumption ÷ days in month Total Consumption ÷ days in quarter Total Consumption ÷ days in FY to date

If the Marine Corps is being reported, the first Received From column will be Army, the second will be Air Force, and the third will be Navy.

If the Air Force is being reported, the first Received From column will be Army, the second will be Navy, and the third will be Marines.

To compute the quantity of product to be reported in each of the Received From columns, it will be necessary to summarize all of the Quantity Issued fields for the period being reported.

FIGURE 4-15

MONTHLY CONSUMPTION SUMMARY

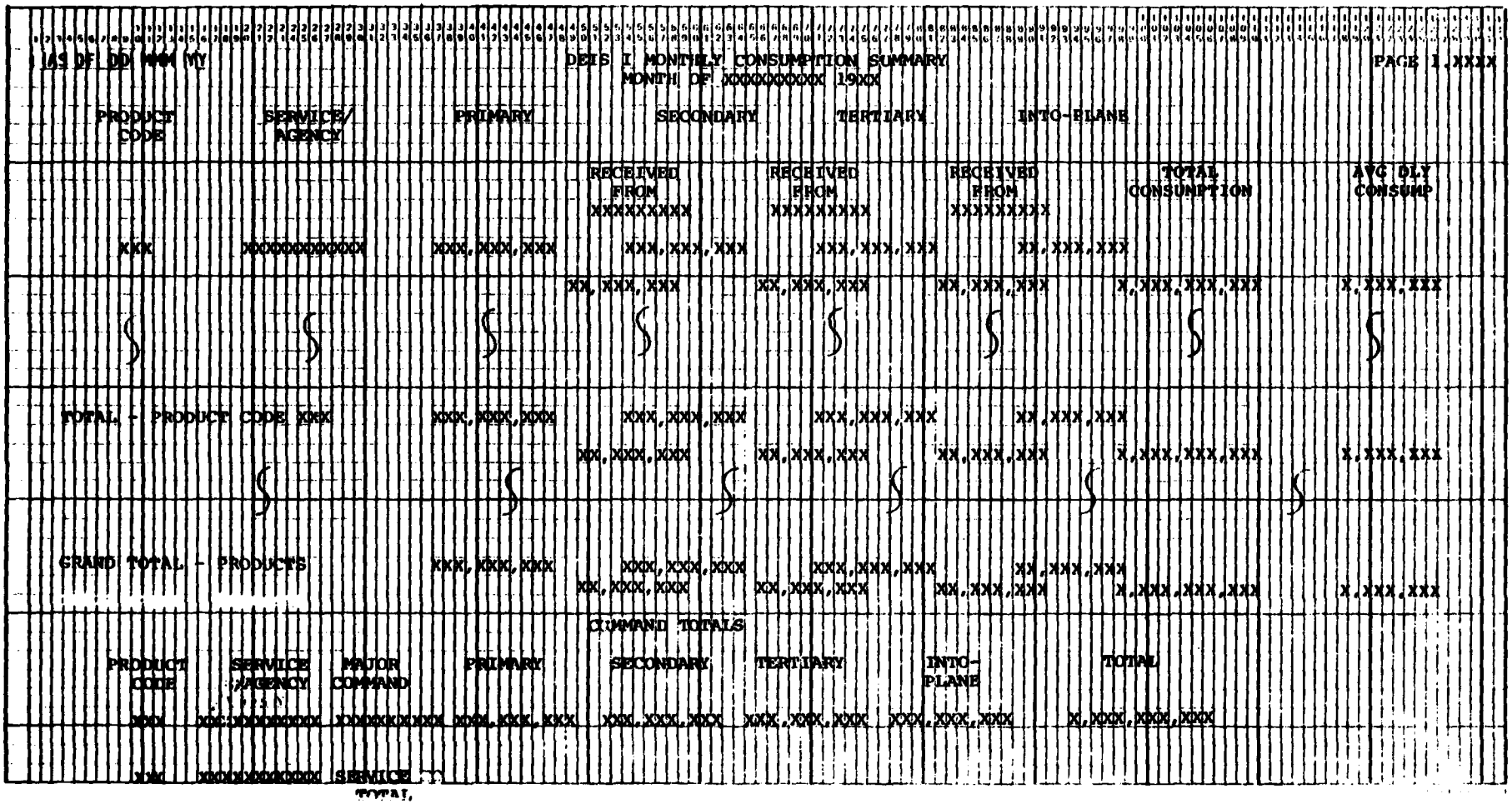


FIGURE 4-16

QUARTERLY CONSUMPTION SUMMARY

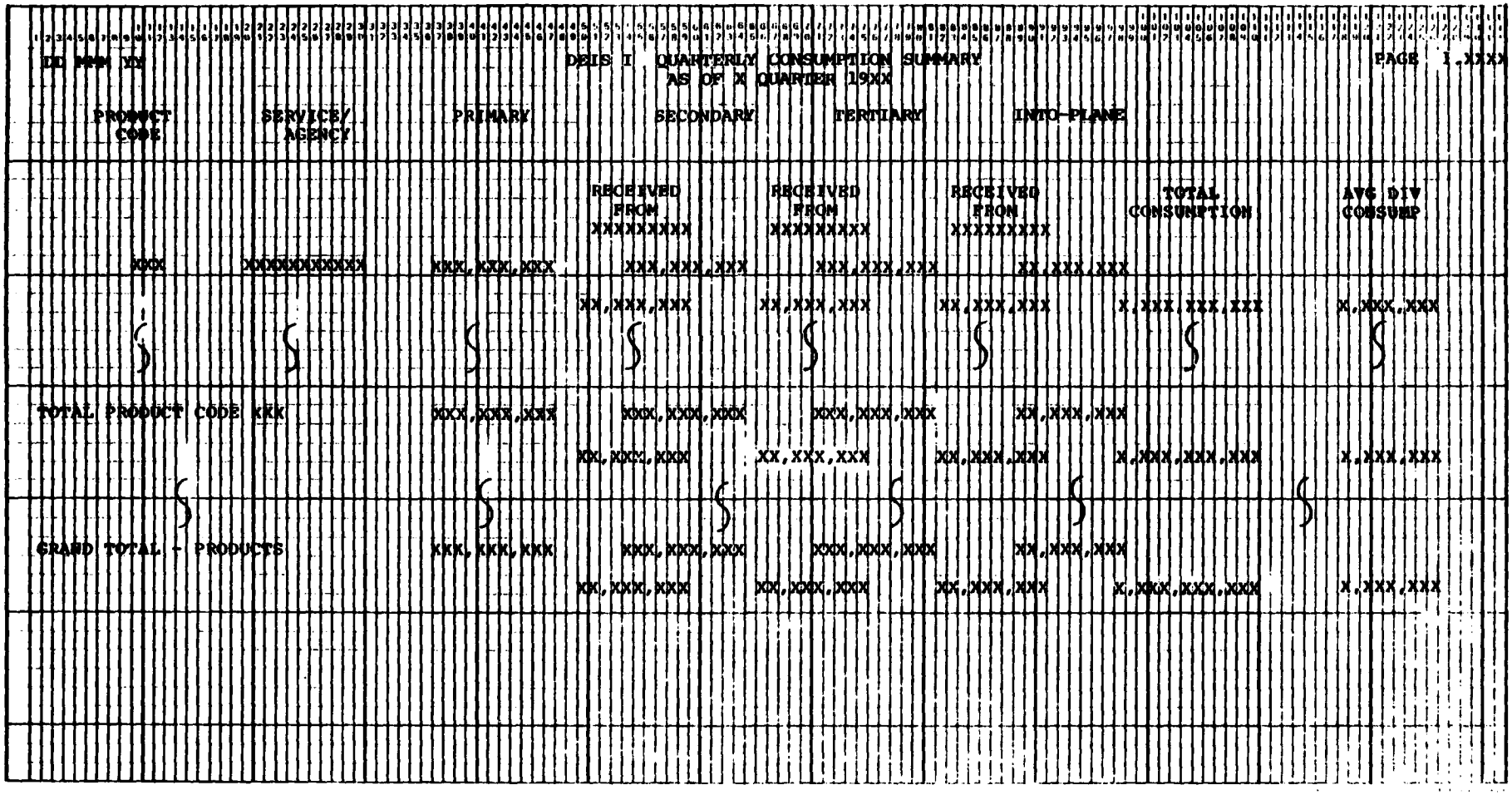
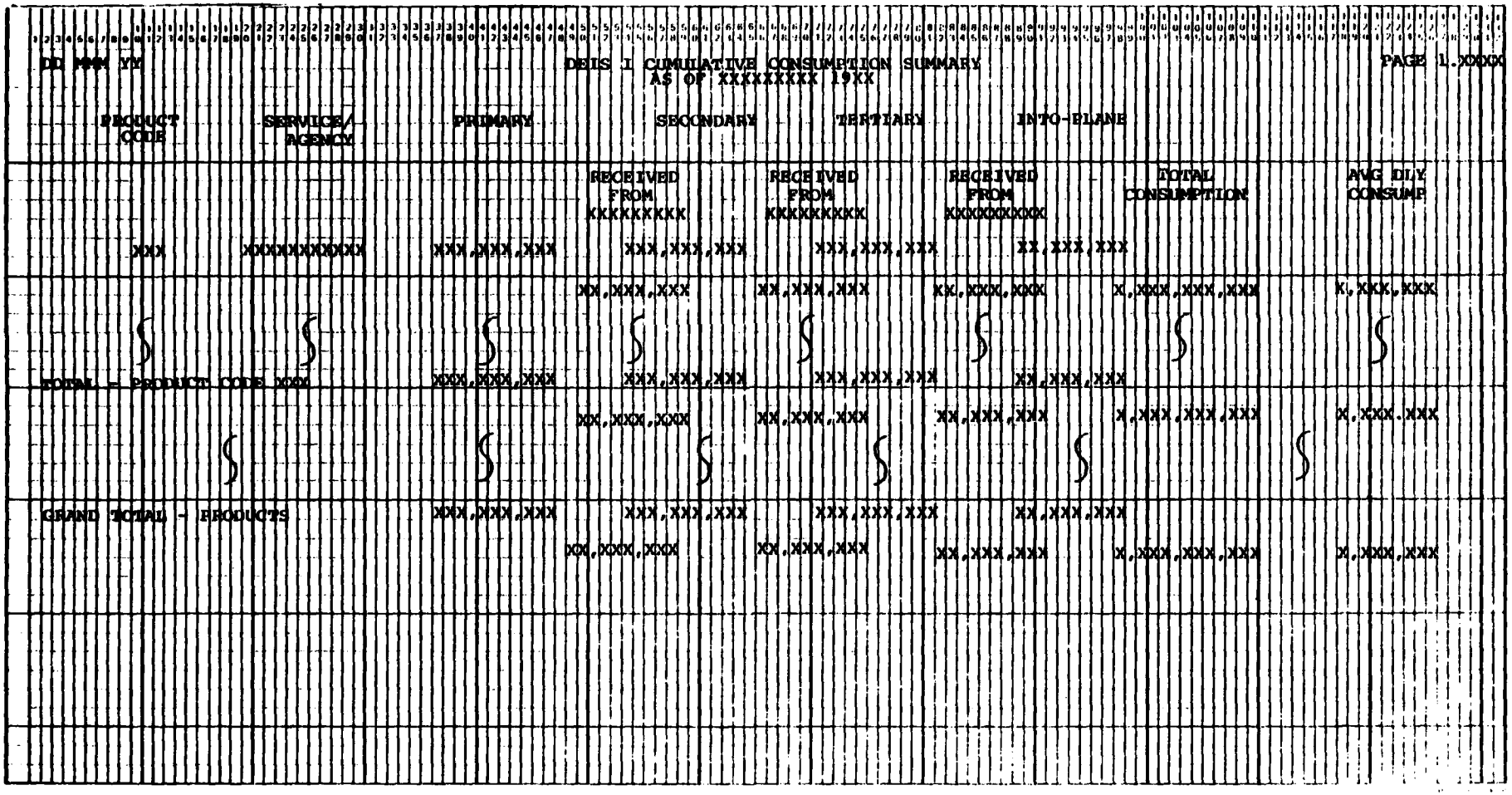


FIGURE 4-17

CUMULATIVE CONSUMPTION SUMMARY



For example, if the Service/agency within the Product Code is Army, the following summaries must be made. All Quantity Issued data reported by the Navy must be reviewed, and every transaction indicating a quantity of product issued to the Army (Quantity Issued to Service 1 by the Navy) must be summarized. This quantity will then be reported as being Received From the Navy on the appropriate Army line on the consumption report.

The above calculation will be required to determine Army receipts from the Air Force and from the Marines. ** Caution: Quantity Issued to the Army by the Navy, Marines and Air Force is always Quantity Issued to Service 1. However, when receipts from the other Services for the Navy, Marine Corps or Air Force are to be determined, various "Quantity Issued" fields on the data base must be examined. Table 4-13 gives the appropriate source of data for calculating the "Received From" data for this report.

Service Total Consumption is the total of the Primary Use, Secondary Use, Tertiary Use, Aviation, and the three received from quantities. The Average Daily Consumption is calculated by dividing the Service Total Consumption for the line reported by the number of days in the period being reported. The number of days in each reporting period will be obtained through a parameter card submitted by DFSC-CB. The number of days in the month will be in columns 4 and 5, the number of days in the quarter in columns 9 and 20, and the number of days-to-date in the fiscal year will be right-justified in columns 13-15. If a report (such as the quarterly report) is not being requested, the number of days column can be blank.

These reports will normally be run twice a month, the first being a preliminary report. All preliminary reports will be run on one-part paper and forwarded to the system operator (DFSC-CB). Page breaks are required only when the page limit is reached.

4.4.8.3.2 Monthly Petroleum Report

This report is primarily a print report, taking data submitted by the Service or agency and printing them in the prescribed format. The second part of the report is a Service Summary, which takes all detail data printed in Part 1 for the Service or agency and provides a summary by Product Code. The data elements printed on the Monthly Petroleum Report are listed in Table 4-14.

The Quantity Issued to Service data elements listed in Table 4-14 are reported in the Sold To fields on the reports. The Sold To fields will vary with the Service being reported. If the installation being reported is Army, the first Sold To field will be Air Force, the second will be Navy, and the third will be Marines.

If the installation being reported is Navy, the first Sold To field will be Army, the second will be Air Force, and the third will be Marines.

If the installation being reported is Marines, the first Sold To field will be Army, the second will be Air Force, and the third will be Navy.

TABLE 4-13

SOURCES FOR
"RECEIVED FROM" DATA

Service being Summarized*			
Army	Received From Air Force Quantity Issued to Service 1(QI1)	Received From Navy QI1	Received From Marines QI1
Navy	Received From Army QI2	Received From Air Force QI2	Received From Marines QI3
Air Force	Received From Army QI1	Received From Navy QI2	Received From Marines QI2
Marine Corps	Received From Army QI3	Received From Air Force QI3	Received From Navy QI3

* If agency data are being summarized, there will be no entries in the three Received From columns.

If the installation being reported is Air Force, the first Sold To field will be Army, the second will be Navy, and the third will be Marines.

The following guidelines should facilitate the proper arrangement of the Sold To data.

- If the installation being reported is Army, the source of data for Sold To Air Force is the Quantity Issued to Service 1 (QI1), the Sold To Navy data is from QI2, and the Sold To Marines is from QI3.
- If the installation being reported is Navy, the Sold To Army data come from QI1, the Sold To Air Force data come from QI2, and the Sold To Marines data come from QI3.
- If the installation being reported is Marine Corps, the Sold To Army data come from QI, the Sold To Air Force data come from QI2, and the Sold To Navy data come from QI3.

TABLE 4-14

PETROLEUM REPORT DATA

Data Element Number	Data Element Description	Source/Comments
21	Product Code	Data Base
19	Opening Inventory	Data Base
15	Issues	Data Base
4	Receipts-Commercial	Data Base
11	Receipts from DoD	Data Base
3	Closing Inventory	Data Base
16	Loss/Downgrade	Data Base
	Gain/Loss	Calculated from book inventory*
33	Service MEA-3	Data Base
34	Service MEA-4	Data Base
22	Primary	Data Base
30	Secondary	Data Base
39	Tertiary	Data Base
1	Aviation Into-Plane	Data Base
23	Quantity Issued to Service 1	Data Base--varies by Service--alias Sold To Field 1
24	Quantity Issued to Service 2	Data Base--varies by Service--alias Sold To Field 2
25	Quantity Issued to Service 3	Data Base--varies by Service--alias Sold to Field 3
18	Quantity to Non-DoD	Data Base
13	Transfers Intra	Data Base
12	Transfers Inter	Data Base
	Average Daily Issues	Calculated, ISSUES ÷ number of days in month/quarter/year to date

* Calculated book inventory = Opening Inventory + Receipts (Commercial) + Receipts from DoD Issues. If the value = Closing Inventory, gain/loss is 0. If the value is greater than Closing Inventory, there is a loss and the value will be indicated with a (-) sign.

- If the installation being reported is Air Force, the Sold To Army data come from QI1, the Sold To Navy data come from QI2, and the Sold To Marines data come from QI3.

The Monthly Petroleum Report will include detail data for individual installations; these installations will be identified as to Major Command, and Major Commands identified to Service/agency. That is, the major print sequence is Major Command within Service/agency, and the minor print sequences are DoDAAC within Major Command and Product Code within DoDAAC. All data for each Major Command will be subtotaled, with each product within the command summarized, to produce a grand total of all products for the command. Part II of the report will summarize all data (by product) for the Service/agency and provide a grand total of all products for the Service/agency. Command consumption (sum of Primary, Secondary, Tertiary and Aviation fields) will be calculated for each product. Totals will also be given for each Major Command for the product types (e.g., aviation gasoline) shown in Table 4-10. Figures 4-18 and 4-19 show the layout of these reports.

In addition a category summary will be printed after each Command Total for that command and after each Service Total for that Service/agency. The category summary pages will utilize the Primary, Secondary, Tertiary and Aviation data only. The categories will be those shown in Table 4-10 except that the jet fuel categories will be combined.

All the data elements listed in Table 4-12 will be applicable (if reported on MEA 2-4 input) to all activities, except DFSC. The printed report, which includes DFSC activities, will only reflect Opening Inventory, Issues, Receipts-Commercial, Receipts From DoD and Closing Inventory. There will be an Average Daily Issue calculated for these activities.

Part I of the report should have page breaks at each change of Major Command, as well as when the page limit is reached. Part 2 of the report (Service Summary) will provide a page break for each Service as well as when the page limit is reached. Each Service/agency report will be booked separately. These reports will normally be run twice a month, the first run being a preliminary one. All preliminary reports will be run on one-part paper and distributed to DFSC-CB.

4.4.8.3.3 Navy Petroleum Report Tape

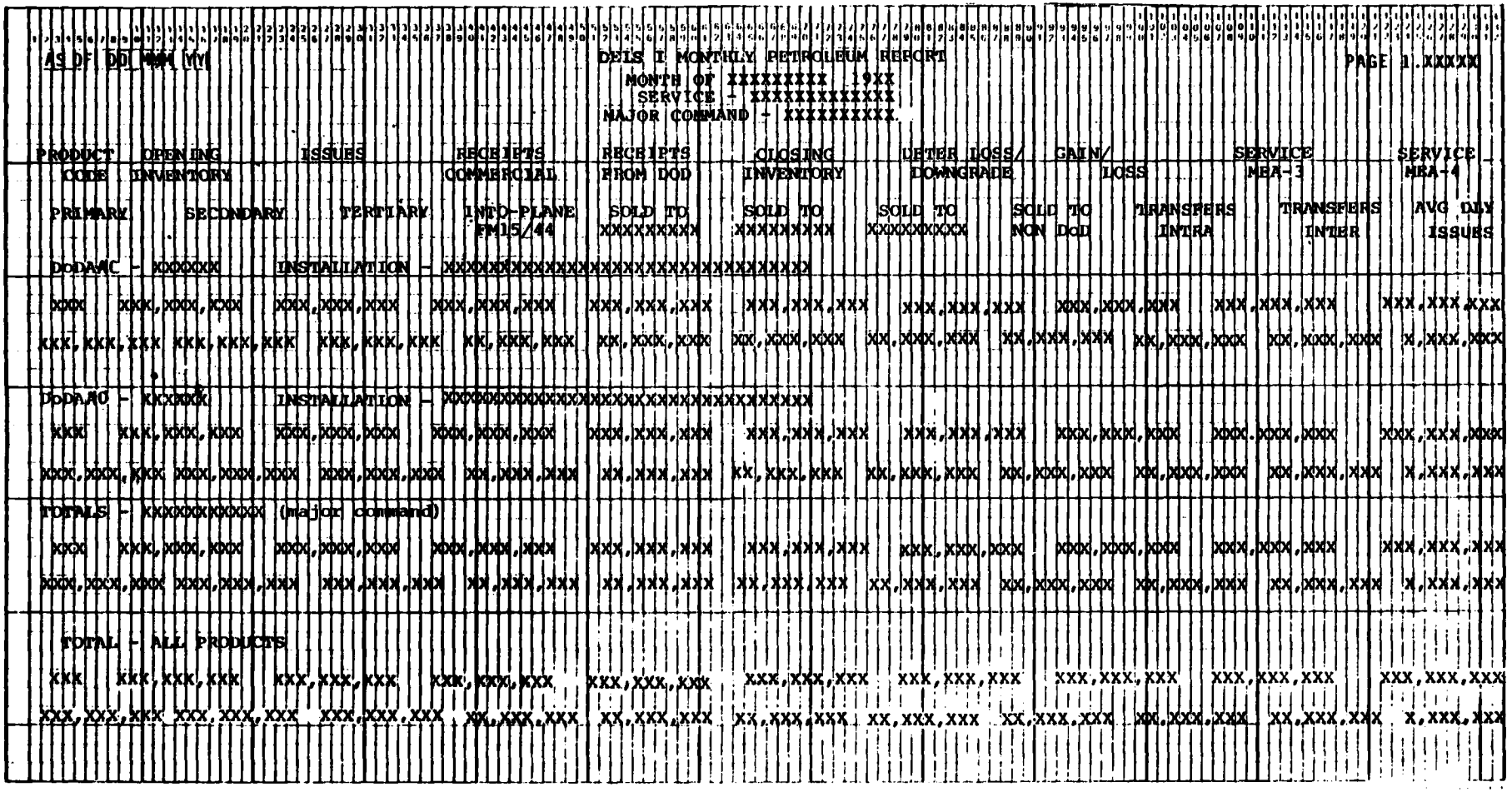
This tape will include all the data required to produce the Navy portion of the Monthly Petroleum Report. It will be produced in conjunction with the Monthly Petroleum Report, before any further updates to the data base are made. Selection criteria will be the data for the DoDAACs identified with an "N" Service/Agency Code. The tape is not in print image format. The record layout is given in Table 4-15. The tape labels are standard, the external label is DSA.H26.NAV00420, the record size is 210, the blocking factor is 30, and the recording mode is F. The tape is 9-track, labeled, odd parity, 800 BPI.

4.4.8.3.4 Navy/Marine Petroleum Report Tape

This tape will include all the data required to produce the Navy and Marine Corps portion of the Monthly Petroleum Report. Selection criteria will be the

FIGURE 4-18

DEIS I MONTHLY PETROLEUM REPORT



AS OF DD MMM YY — DEIS I MONTHLY PETROLEUM REPORT — PAGE 1.XXXXX

MONTH OF XXXXXXXXX 19XX
SERVICE - XXXXXXXXXXXX
MAJOR COMMAND - XXXXXXXXXX

PRODUCT CODE	OPENING INVENTORY	ISSUES			RECEIPTS COMMERCIAL	RECEIPTS FROM DOD	CLOSING INVENTORY	LETTER LOSS/ DOWNGRADE	GAIN/ LOSS	SERVICE MEA-3		SERVICE MEA-4	
	PRIMARY	SECONDARY	TERTIARY	INTO-PLANE FM15/44	SOLD TO XXXXXXXXX	SOLD TO XXXXXXXXX	SOLD TO XXXXXXXXX	SOLD TO NON DoD		TRANSFERS INTRA	TRANSFERS INTER	AVG DLY ISSUES	
DoDAAC - XXXXXX INSTALLATION - XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX													
XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX
XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XX,XXX,XXX	XX,XXX,XXX	XX,XXX,XXX	XX,XXX,XXX	XX,XXX,XXX	XX,XXX,XXX	XX,XXX,XXX	XX,XXX,XXX	X,XXX,XXX	
DoDAAC - XXXXXX INSTALLATION - XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX													
XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX
XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XX,XXX,XXX	XX,XXX,XXX	XX,XXX,XXX	XX,XXX,XXX	XX,XXX,XXX	XX,XXX,XXX	XX,XXX,XXX	XX,XXX,XXX	X,XXX,XXX	
TOTALS - XXXXXXXXXXXX (major command)													
XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX
XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XX,XXX,XXX	XX,XXX,XXX	XX,XXX,XXX	XX,XXX,XXX	XX,XXX,XXX	XX,XXX,XXX	XX,XXX,XXX	XX,XXX,XXX	X,XXX,XXX	
TOTAL - ALL PRODUCTS													
XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX
XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XX,XXX,XXX	XX,XXX,XXX	XX,XXX,XXX	XX,XXX,XXX	XX,XXX,XXX	XX,XXX,XXX	XX,XXX,XXX	XX,XXX,XXX	X,XXX,XXX	

FIGURE 4-19

DEIS I SERVICE SUMMARY

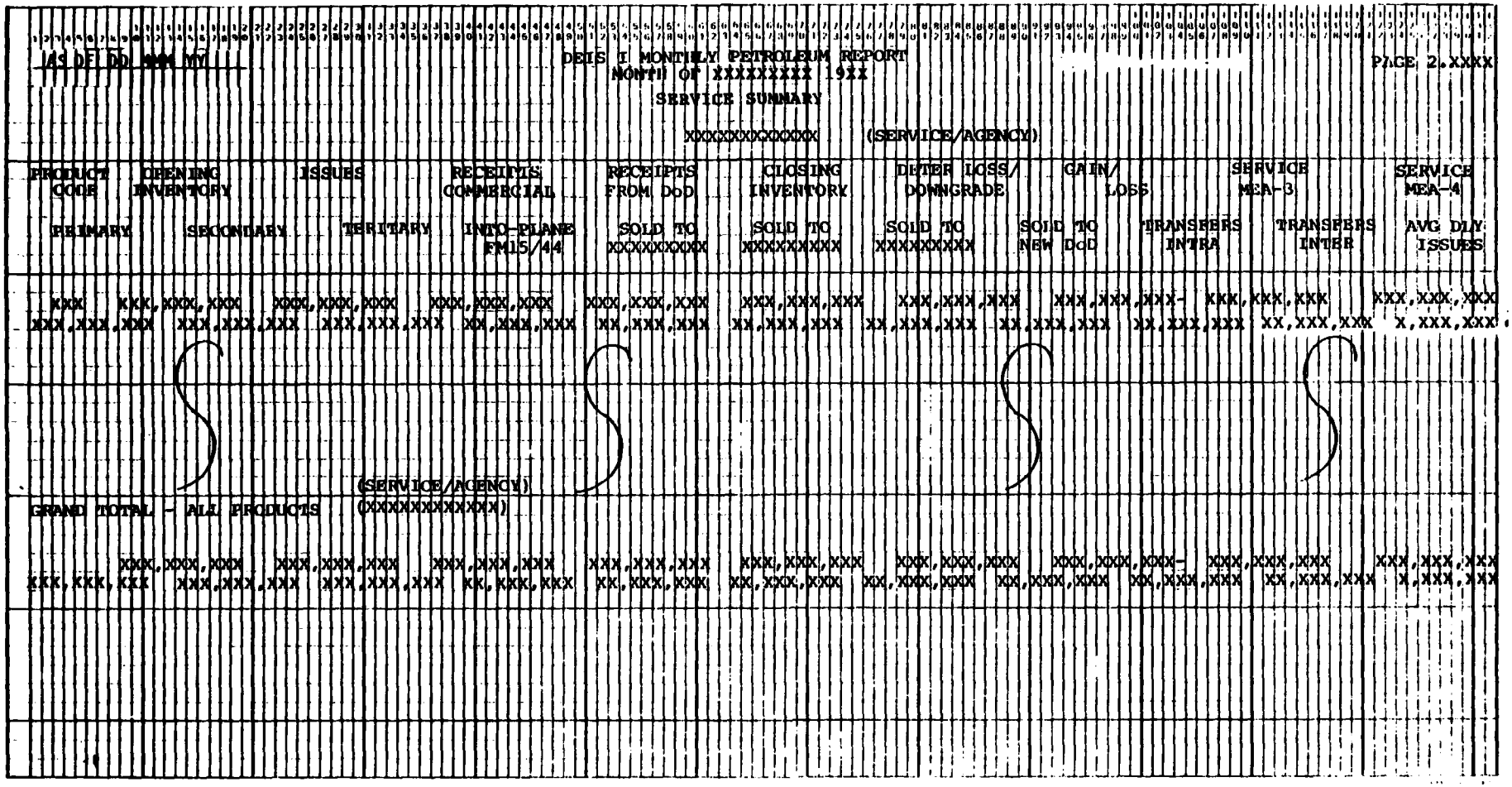


TABLE 4-15

PETROLEUM REPORT TAPE LAYOUT

Field Name Description	Number of Bytes	Field Location From	Field Location To	Picture	Usage
DoDAAC	7	1	7		
DoDAAD	6	1	6	X	DISPLAY
TAC	1	7	7	X	
FILLER	1	8	8	X	
REGION	2	9	10	X	
FILLER	1	11	11	X	
STATE	2	12	13	X	
FILLER	1	14	14	X	
PRODUCT	3	15	17	X	
FILLER	1	18	18	X	
INSTALLATION NAME	40	19	58	X	
FILLER	1	59	59	X	
MAJOR COMMAND	10	60	69	X	
FILLER	1	70	70	X	
SERVICE	1	71	71	X	
FILLER	1	72	72	X	
JULIAN DATE - REPORT CYCLE	5	73	77		
JULIAN YEAR	2	73	74	9	DISPLAY
JULIAN DAY	3	75	77	9	
FILLER	1	78	78	X	
OPENING INVENTORY	11	79	89	9	
FILLER	1	90	90	X	
TOTAL CONSUMPTION	11	91	101	9	

TABLE 4-15

PETROLEUM REPORT TAPE LAYOUT (Continued)

Field Name Description	Number of Bytes	Field Location From	Field Location To	Picture	Usage
FILLER	1	102	102	X	DISPLAY
TOTAL RECEIPTS CONTRACT	11	103	113	9	
FILLER	1	114	114	X	
TOTAL RECEIPTS DoD AND OTHER	11	115	125	9	
FILLER	1	126	126	X	
CLOSING INVENTORY	11	127	137	9	
FILLER	1	138	138	X	
AVERAGE DAILY CONSUMPTION	9	139	147	9	
FILLER	1	148	148	X	
FIRST QUANTITY ISSUED	6	149	154	9	
FILLER	1	155	155	X	
SECOND QUANTITY ISSUED	6	156	161	9	
FILLER	1	162	162	X	
QUANTITY TO DoD AND OTHER	6	163	168	9	
FILLER	1	169	169	X	
PRIMARY USE	6	170	175	9	
FILLER	1	176	176	X	
SECONDARY USE	6	177	182	9	
FILLER	1	183	183	X	
TERTIARY USE	6	184	189	9	
FILLER	1	190	190	X	
SERVICE FIRST USE	6	191	196	9	
FILLER	1	197	197	X	
SERVICE SECOND USE	6	198	203	9	DISPLAY
FILLER	7	204	210	X	DISPLAY

data for the DoDAACs identified with an "N" or an "M" Service/Agency Code. As in 4.3.8.3.3, the tape will be produced in conjunction with the Monthly Petroleum Report and will contain raw data rather than print images. The tape record layout is given in Table 4-15. The tape labels are standard, the external label is DSA.H26.NAV00410, the record size is 210, the blocking factor is 30, and the recording mode is F. The tape is 9-track, labeled, odd parity, 800 BPI. It should be mailed to:

David W. Taylor Naval Ship Research and Development Center
Code 2705
Annapolis, Maryland 21402.

4.4.8.3.5 Army Petroleum Report Tape

This tape will include all the data required to produce the Army portion of the Monthly Petroleum Report. Selection criteria will be the data for the DoDAACs identified with an "A" or "B" Service/Agency Code. The tape will be produced in conjunction with the Monthly Petroleum Report and will contain raw data rather than print images. The tape record layout is given in Table 4-15. The tape labels are standard, the external label is DSA.H26.ARM00420, the record size is 210, the blocking factor is 30, and the recording mode is F. The tape is 9-track, labeled, odd parity, 800 BPI. It should be mailed to:

Commander USAMSSA
DASC-AMF-B
ATTN: Charles Joyce
Room 8D997, Pentagon
Washington, D. C. 20310.

4.4.8.3.6 Cumulative Petroleum Reports

The criteria for producing the Cumulative Petroleum Reports are the same as for the monthly reports as described in 4.4.8.3.2. The only differences are the following:

- The cumulative reports will reflect fiscal year-to-date (all monthly input).
- The calculation of Average Daily Issues will be made by dividing the cumulative total issues by the total number of days which have elapsed during the fiscal year.

The sequence, subtotals, page breaks, and reporting cycle will be the same as for the monthly reports. The first page will show the definitions of Product Codes, and Primary, Secondary and Tertiary as on the monthly reports. Figures 4-20 and 4-21 show the layout of the Cumulative Petroleum Reports.

4.4.8.3.7 Monthly/Quarterly Installation and Other Summary Reports

The following series of reports will be printed in sequence on both a monthly and quarterly basis.

Part 1 - DEIS I Monthly Worldwide Category Summary

FIGURE 4--20

CUMULATIVE PETROLEUM REPORT

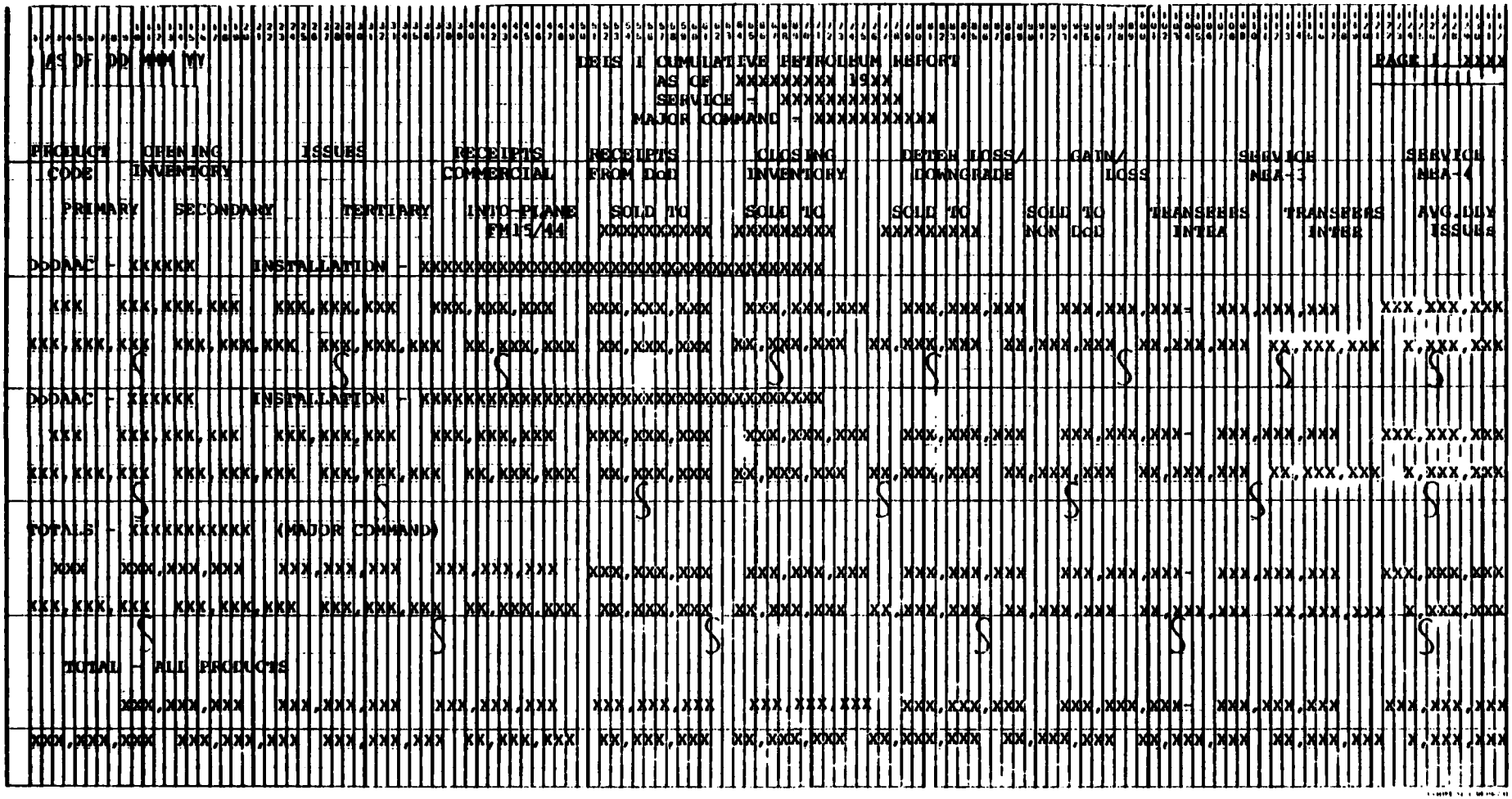
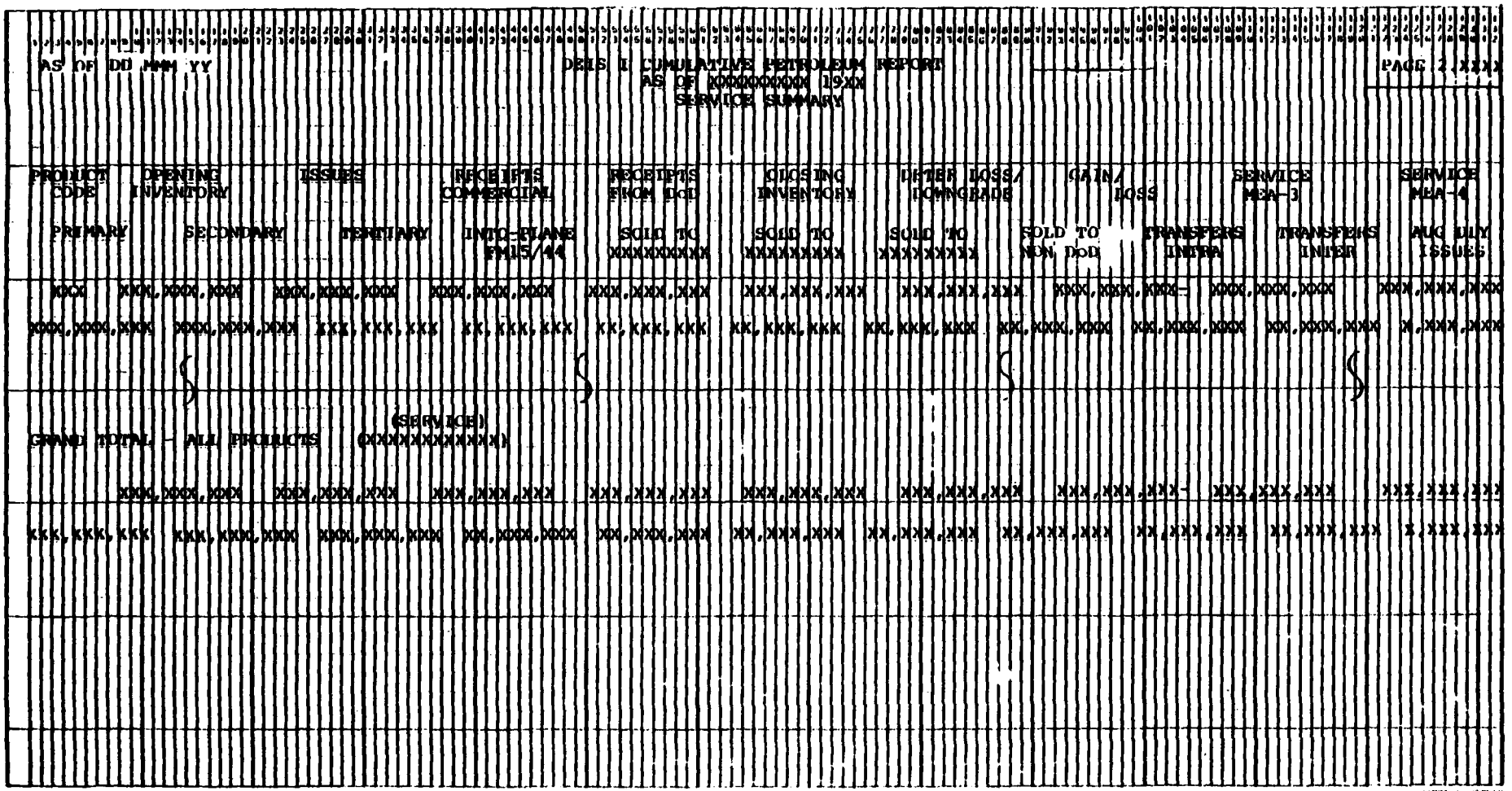


FIGURE 4-21

CUMULATIVE PETROLEUM SERVICE SUMMARY



Part 2 - DEIS I Monthly Worldwide Summary Report

Part 3 - DEIS I Monthly CONUS Summary Report

Part 4 - Region Summary Totals

Part 5 - Vessel Summary Totals

Part 6 - State Summary Totals

Part 7 - DEIS I Monthly Installation Summary

These reports will generally be run twice a month, the first run being a preliminary report. All preliminary reports will be run on one-part paper and forwarded to DFSC-CB.

The reports will be run in the same sequence on a quarterly basis. The selection criteria will not change, except that the data selected to print will be for three months instead of one.

The above series consists of one detail report (Part 7), preceded by various summaries of that detail. Hence, criteria for selecting data for the detail report will be developed first, followed by discussion of the other six reports in reverse order.

Part 7 - DEIS I Monthly Installation Summary

The major sequence of this report is DOE Region/CINC. The sequence within this major sort, which will be followed for the report is as follows.

The 10 regions within CONUS will come first, in numerical order. The sequence of CINCs will be ALASKA (formerly called CINCAL), CINCLANT, Canada and Greenland, CINCEUR, CINCPAC, CINCSOU, and then a list of vessels. The title of the last portion will be VESSELS.

The next sequence is State/Country within Region/CINC. The sequence for CONUS regions will be the states within the region in alphabetical order. For CINCs, it will be the countries within a CINC in the order listed in Table 4-8. There will be no sub-sort within the VESSELS portion of the report.

After this initial breakout, activities within a State/Country will be divided between DFSC and Retail Activities, with DFSC Activities printed first. After this segregation, activities will be printed in DoDAAC sequence. The last sequence will be Product Code within DoDAAC. Product Codes will be printed in alphabetical order within DoDAAC, with numerical codes in order first, followed by alphabetical codes.

The data elements printed on the report and their sources are as follows:

- DOE Region/CINC--Determined by matching the DoDAAC of the submitting activity to the coded information file

- State/Country--Determined by referring to the coded information file
- DoDAAC--Data base
- Installation Name--Determined from coded information
- Product Code--Data base
- Opening Inventory--Data base
- Issues--Data base
- Receipts-Commercial--Data base
- Receipts from DoD--Data base
- Closing Inventory--Data base
- Average Daily Issues--Calculated value of Issues divided by number of days in reporting period

No summaries, subtotals, or totals are required for this part. Figure 4-22 gives a sample layout of this report. Page breaks are required for each change in State/Country, for each change in Region/CINC, and when the page limit is reached.

Quarterly Reports

The sequence, subtotal, page break, and other criteria will be the same for the quarterly as for the monthly Installation Summaries. The heading will change from Monthly to Quarterly, and the date from Month Of to As Of.

The quarterly report will be printed at the end of the quarter and will include data for the three months of that quarter only. The Opening Inventory will be the inventory at the beginning of the first month of the quarter. Issues, Receipts-Commercial, and Receipts From DoD will be an accumulation of the three months within the quarter being reported. The Closing Inventory is the inventory at the end of the last month in the quarter. Average Daily Issues will be calculated using the number of days in the quarter.

Part 6 - State Summary Totals

This report has the same sort sequences (Region/CINC and State/Country within Region/CINC) as the detail report. However, individual DoDAACs are not listed. This part of the report summarizes detail installation data at the DFSC and retail levels, by Product Code, for each State/Country. Within each Product Code, a summary line is printed for Retail activities within the State/Country, and for DFSC activities, as well as a total (Retail & DFSC) for the State/Country. A total of all Product Codes is provided at the end of each State/Country summary.

The source of data for this accumulation is the detail report (Part 7). Average Daily Issues is again a calculated value (Issues ÷ days reported). Vessels are not summarized in this report, as they cannot be assigned a State/Country.

FIGURE 4-22

MONTHLY INSTALLATION SUMMARY

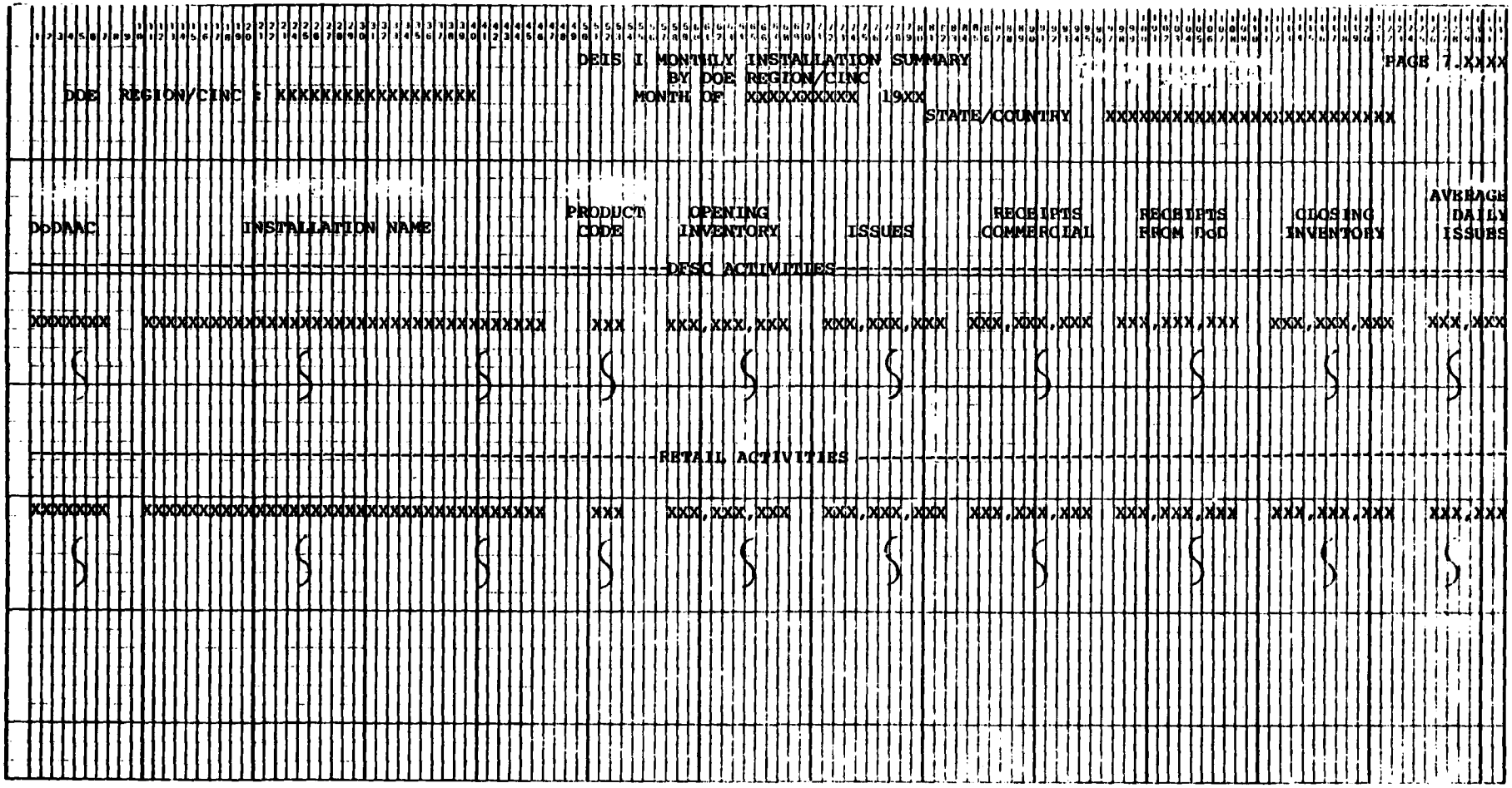


Figure 4-23 provides a sample format for this report. Page breaks are required for each change in State/Country, each change in Region/CINC, and when the page limit is reached.

As in Part 7, the sequence, subtotal, page break and other criteria will be the same for the quarterly reports as for the monthlies. The heading will be changed from Monthly to Quarterly, and the date from Month Of to As Of.

The quarterly report will include data for the three months of the quarter being reported only. The Opening Inventory will be the inventory at the beginning of the first month of the quarter. Issues, Receipts-Commercial and Receipts-From DoD will be an accumulation of the three months within the quarter being reported. The Closing Inventory is the inventory at the end of the last month in the quarter. Average Daily Issues will be calculated using the number of days in the quarter.

Part 5 - Vessel Summary Totals

This report summarizes the vessel detail data from Part 7 in the same manner as Part 6 summarized State/Country data. Again, this part of the report will not include a State/Country, and the Region/CINC will be identified as Vessels. Data elements printed are the same as those in the State/Country Summary: Product Code, Opening Inventory, Issues, Receipts-Commercial, Receipts From DoD, Closing Inventory, and Average Daily Issues. All data are a total of detail printed in Part 7, summarized by Product Code and Retail or DFSC activity within Product Code. The report furnishes a total of all products, also segregated by Retail, DFSC and Total.

Figure 4-24 provides a sample layout of this report. Page breaks are needed only when the page print limit is reached.

Quarterly reports have the same criteria as the monthly reports, with the same heading and data changes as specified for the Part 7 quarterlies.

Part 4 - Region Summary Totals

This part summarizes all detail data by Region/CINC, and excludes Vessels, already summarized in Part 5. Data elements are DOE Region/CINC, Product Code, Opening Inventory, Issues, Receipts-Commercial, Receipts From DoD, Closing Inventory, and Average Daily Issues. Detail data within each Region/CINC is totalled by Product Code for each Retail and DFSC activity, and printed. A total is also required for each Product Code, and the report will provide a total of all products, broken out by Retail, DFSC and Total.

Figure 4-25 gives a sample format of this report. Page breaks are required at each new Region/CINC.

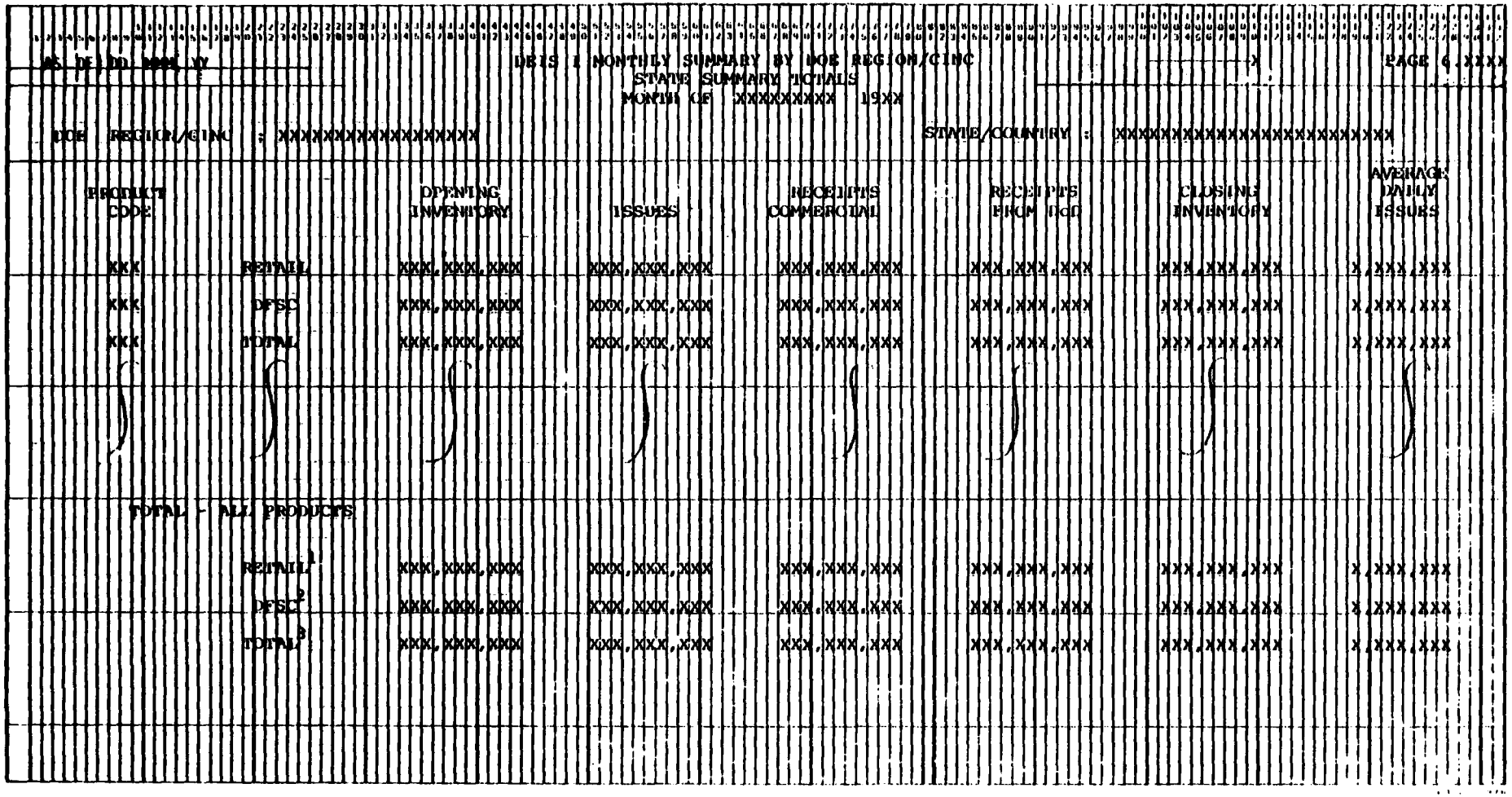
Quarterly reports have the same criteria as the monthly reports, with heading and data changes as specified for the Part 7 quarterlies.

Part 3 - DEIS I Monthly CONUS Summary Report

This part of the report is a summary of all installations within CONUS. It summarizes all data on Regions 1 through 20 by Product Code. A total is

FIGURE 4-23

MONTHLY SUMMARY BY DOE REGION/CINC



AS OF MO. DAY, YY — DOE1 | MONTHLY SUMMARY BY DOE REGION/CINC — PAGE 6 XXXX

STATE SUMMARY TOTALS

MONTH OF XXXXXXXXX 19XX

DOE REGION/CINC : XXXXXXXXXXXXXXXXX — STATE/COUNTRY : XXXXXXXXXXXXXXXXXXXXXX

PRODUCT CODE		OPENING INVENTORY	ISSUES	RECEIPTS COMMERCIAL	RECEIPTS FROM DOD	CLOSING INVENTORY	AVERAGE DAILY ISSUES
XXX	RETAIL	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX
XXX	DFSC	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX
XXX	TOTAL	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX
TOTAL - ALL PRODUCTS							
	RETAIL[1]	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX
	DFSC[2]	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX
	TOTAL[3]	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX

[1] This total is calculated by summing all the Retail lines for all the Product Codes.

[2] This total is calculated by summing all the DFSC lines for all the Product Codes.

[3] This total is calculated by summing all the Total lines for the Product Codes. It must also equal the sum of the total Retail and DFSC values.

FIGURE 4-24

DEIS I MONTHLY SUMMARY BY DOE REGION/CINC

VESSEL SUMMARY

DD MMM YY — DEIS I MONTHLY SUMMARY BY DOE REGION/CINC — PAGE 5.XXXX

VESSEL SUMMARY TOTALS
MONTH OF XXXXXXXXX 19XX

DOE REGION/CINC VESSELS

PRODUCT CODE		OPENING INVENTORY	ISSUES	RECEIPTS COMMERCIAL	RECEIPTS FROM DoD	CLOSING INVENTORY	AVERAGE DAILY ISSUES
XXX	RETAIL						
XXX	DFSC						
XXX	TOTAL						

SAME DETAIL AS ON REGION/CINC SUMMARY (FIGURE 4-23)

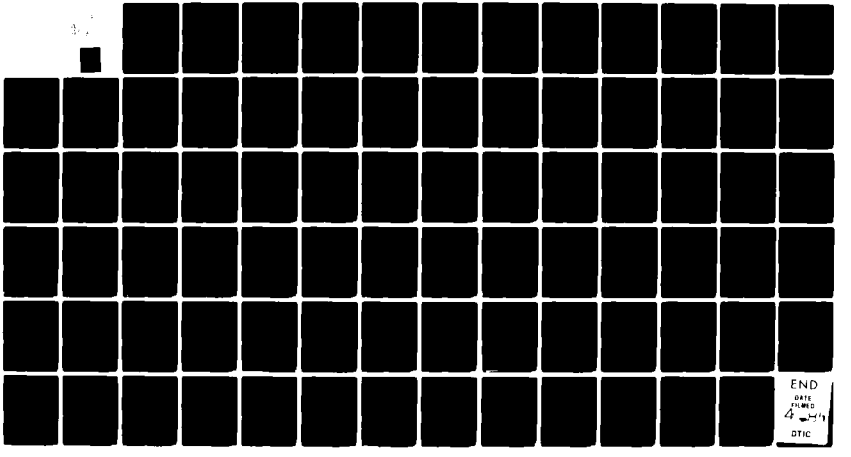
TOTAL - ALL PRODUCTS							
	RETAIL[1]						
	DFSC[2]						
	TOTAL[3]						

[1]This total is calculated by summing all the Retail lines for all the Product Codes.

[2]This total is calculated by summing all the DFSC lines for all the Product Codes.

[3]This total is calculated by summing all the Total lines for the Product Codes. It must also equal the sum of the total Retail and DFSC values.

AD-A096 263 LOGISTICS MANAGEMENT INST WASHINGTON DC F/G 5/1
DEFENSE ENERGY INFORMATION SYSTEM (DEIS): DEIS-80 SYSTEM DESIGN--ETC(U
AUG 80 J LENGEL MDA903-77-C-0370
UNCLASSIFIED LMI-ML917 NL



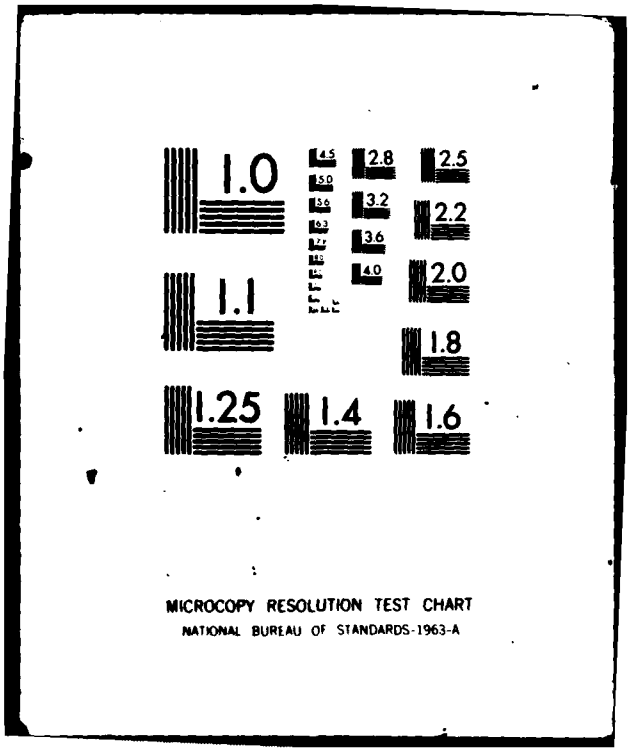
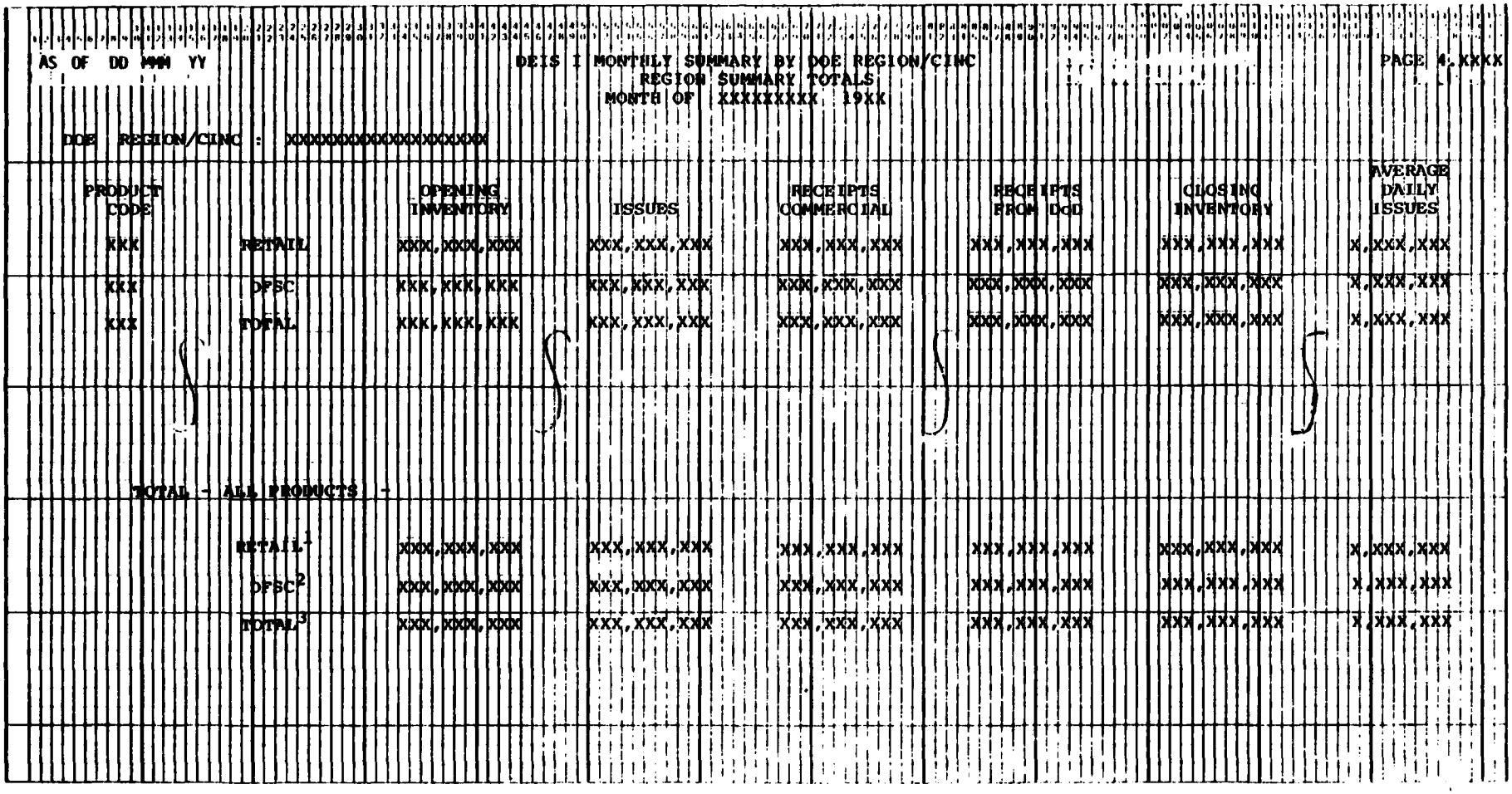

1.0
1.1
1.25
1.4
1.6
1.8
2.0
2.2
2.5
2.8
3.2
3.6
4.0
4.5
5.0
5.6
6.3
7.1
8.0
9.0
MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

FIGURE 4-25

DEIS I MONTHLY SUMMARY BY DOE REGION/CINC

REGION SUMMARY



AS OF DD MMM YY — DEIS I MONTHLY SUMMARY BY DOE REGION/CINC — PAGE 4.XXXX

REGION SUMMARY TOTALS
MONTH OF XXXXXXXXX 19XX

DOE REGION/CINC : XXXXXXXXXXXXXXXXXX

PRODUCT CODE		OPENING INVENTORY	ISSUES	RECEIPTS COMMERCIAL	RECEIPTS FROM DoD	CLOSING INVENTORY	AVERAGE DAILY ISSUES
XXX	RETAIL	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX
XXX	DFSC	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX
XXX	TOTAL	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX
TOTAL - ALL PRODUCTS -							
	RETAIL[1]	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX
	DFSC[2]	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX
	TOTAL[3]	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX

[1] This total is calculated by summing all the Retail lines for all the Product Codes.

[2] This total is calculated by summing all the DFSC lines for all the Product Codes.

[3] This total is calculated by summing all the Total lines for the Product Codes. It must also equal the sum of the total Retail and DFSC values.

calculated for the Retail and DFSC lines for each Product Code. The Grand Total totals all Retail, DFSC and Total lines. Figure 4-26 gives a sample format for this report.

Part 2 - DEIS I Monthly Worldwide Summary Report

This part of the report is an overall summary of all detail data in Part 7, and is a compilation of data from the 10 CONUS Regions, all CINCs, and Vessels. The data elements summarized are the same as in all the other summaries. Figure 4-27 gives a sample format of this report. The report is in Product Code sequence, each Product Code having a Retail, DFSC, and Total line.

When the Grand Total is calculated, it must be verified. The total of all Retail lines within each Product Code will be added to get the Grand Total-Retail. The same will be done for the DFSC and Total lines. The Grand Total will then be verified by adding the Grand Total-Retail and DFSC lines. This report is a consolidation by Product Code of all data reported for the month for all CONUS Regions and all overseas CINCs.

Page breaks are needed only when the maximum lines of print are reached.

The sequence subtotal, page break, and other criteria will be the same for the quarterly reports as for the monthly reports. The heading will be changed from Monthly to Quarterly, and the date of the report will be changed from Month of to As Of.

The quarterly report will include data for the three months of the quarter being reported only. The Opening Inventory will be the inventory at the beginning of the first month of the quarter. Issues, Receipts-Commercial and From DoD will be an accumulation of the three months within the quarter being reported. The Closing Inventory is the inventory at the end of the last month in the quarter. Average Daily Issues will be calculated using the number of days in the quarter.

Part 1 - DEIS I Monthly Worldwide Category Summary

This part of the report contains the same data as Part 2, except that categories of products are reported instead of Product Codes. The sequence in which the Product Categories should be printed is as displayed in Figure 4-28. This summary will be produced for each Service and for all DoD.

See Table 4-9 for criteria for consolidating Product Codes into Product Categories. Heating Fuels (Distillates and Residuals) will be added to provide Total Heating Fuels. This report will contain a Grand Total-All Categories, which must equal the Total line on the Monthly Worldwide Summary Report.

The sequence, subtotal, page break, and other criteria will be the same for the quarterly reports as for the monthlies. The heading will be changed from Monthly to Quarterly, and the date from Month Of to As Of. The first page of both the monthly and quarterly reports will contain a list of all Product Codes in each Product Category, a definition of each Product Code, and definitions of Primary, Secondary, and Tertiary for each Service.

FIGURE 4-26

MONTHLY CONUS SUMMARY REPORT

DD MMM YY DEIS I MONTHLY CONUS SUMMARY REPORT PAGE XXXX
MONTH OF XXXXXXXXX 19XX

PRODUCT CODE		OPENING INVENTORY	ISSUES	RECEIPTS COMMERCIAL	RECEIPTS FROM DoD	CLOSING INVENTORY	AVERAGE DAILY ISSUES
XXX	RETAIL	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX
XXX	DFSC	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX
XXX	TOTAL	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX
GRAND TOTAL - ALL PRODUCTS							
	RETAIL[1]	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX
	DFSC[2]	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX
	TOTAL[3]	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX

[1]This total is calculated by summing all the Retail lines for all the Product Codes.

[2]This total is calculated by summing all the DFSC lines for all the Product Codes.

[3]This total is calculated by summing all the Total lines for the Product Codes. It must also equal the sum of the total Retail and DFSC values.

FIGURE 4-27

WORLDWIDE SUMMARY REPORT

AS OF DD MMM YY — DEIS I MONTHLY WORLDWIDE SUMMARY REPORT — PAGE 1 XXXX
MONTH OF XXXXXXXXX 19XX

PRODUCT CODE		OPENING INVENTORY	ISSUES	RECEIPTS COMMERCIAL	RECEIPTS FROM DoD	CLOSING INVENTORY	AVERAGE DAILY ISSUES
XXX	RETAIL	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX
XXX	DFSC	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX
XXX	TOTAL	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX
GRAND TOTAL - ALL PRODUCTS							
	RETAIL[1]	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX
	DFSC[2]	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX
	TOTAL[3]	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX

[1] This total is calculated by summing all the Retail lines for the Product Codes.

[2] This total is calculated by summing all the DFSC lines for all the Product Codes.

[3] This total is calculated by summing all the Total lines for the Product Codes. It must also equal the sum of the total Retail and DFSC values.

FIGURE 4-28

WORLDWIDE CATEGORY SUMMARY

AS OF DD MMM YY — DEIS I MONTHLY WORLDWIDE CATEGORY SUMMARY — PAGE 1. XXXX
MONTH OF XXXXXXXXX 19XX

PRODUCT CATEGORY	OPENING INVENTORY	ISSUES	RECEIPTS COMMERCIAL	RECEIPTS FROM DoD	CLOSING INVENTORY	AVERAGE DAILY ISSUES
AVIATION GASOLINES	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX
JET FUELS	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX
DISTILLATES	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX
AUTOMOTIVE GASOLINES	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX
RESIDUALS	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX
HEATING FUEL - DISTILLATES	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX
HEATING FUEL - RESIDUALS	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX
TOTAL - HEATING FUELS	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX
GRAND TOTAL, ALL CATEGORIES	X,XXX,XXX,XXX	X,XXX,XXX,XXX	X,XXX,XXX,XXX	X,XXX,XXX,XXX	X,XXX,XXX,XXX	XX,XXX,XXX

The quarterly report will include data for the three months of the quarter being reported only. The Opening Inventory will be the inventory at the beginning of the first month of the quarter. Issues, Receipts-Commercial, and Receipts From DoD will be an accumulation of the three months within the quarter being reported. The Closing Inventory is the inventory at the end of the last month in the quarter. Average Daily Issues will be calculated using the number of days in the quarter.

4.4.8.3.8 Cumulative Reports

The three-part cumulative summary report produced each month will be generated in the same manner as the monthly summaries. The cumulative reports are:

Part 1 - DEIS I--Cumulative Worldwide Category Summary

Part 2 - DEIS I--Cumulative Worldwide Summary Report

Part 3 - DEIS I--Cumulative CONUS Summary Report

These three summaries include the same data elements as the monthly summaries. The only difference is that the data reflected on the cumulative reports are fiscal year-to-date as of the date that the report is run. These summaries are merely totals of all previous monthly reports for the fiscal year.

Average Daily Issues on the cumulative reports are calculated by dividing Total Issues by the number of days reported to date in the fiscal year.

This set of reports will be in the same sequence, will provide the same subtotals and page breaks as the monthly reports of the same name (see 4.3.8.3.7). Figures 4-29 and 4-30, and 4-31 show sample layouts of these reports.

These cumulative reports should be printed and booked immediately in front of Parts 1 through 3 of the monthly reports of the same name.

These reports will not be included in the quarterly series of reports.

The cumulative reports will normally be run twice a month, the first being a preliminary report. All preliminary reports will be run on one-part paper and forwarded to DFSC-CB.

4.4.8.3.9 Navy/Marine Installation Summary Tape

This tape will include all the data required to produce the monthly installation summary reports for all Navy and Marine Corps activities. Selection criteria will be the data for those DoDACCs identified with a "M" or "N" Service/Agency Code. This tape will be produced in conjunction with the Monthly Installation Summary (4.4.8.3.7), before any further changes to the data base are processed.

This tape contains raw data, not print images. The tape record layout is given in Table 4-16. The tape labels are standard, the external label is DSA.H26.NAV00110, the record size is 150, the blocking factor is 23, and the

FIGURE 4-29

CUMULATIVE WORLDWIDE CATEGORY SUMMARY

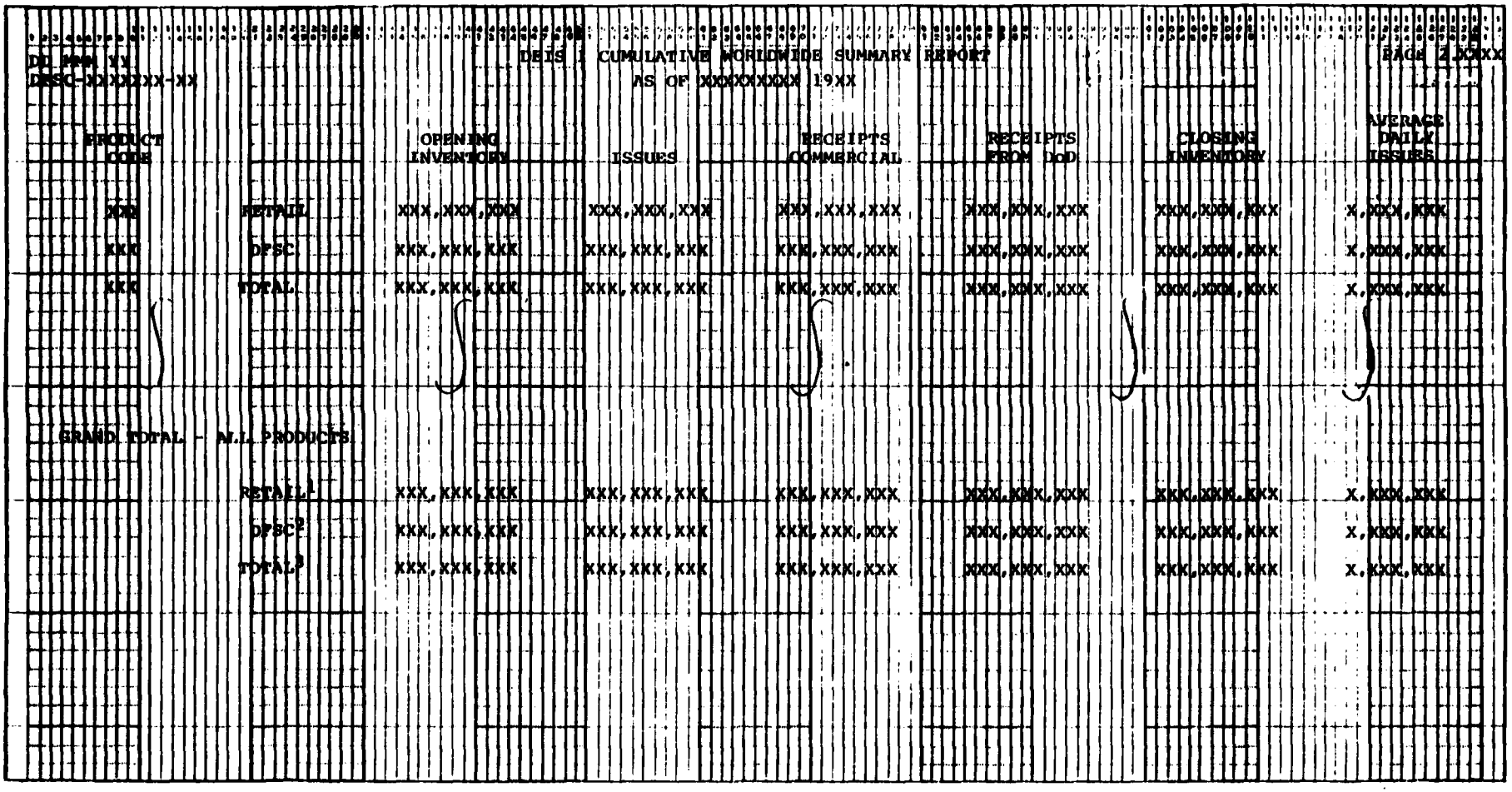
AS OF DD MMM YY — DEIS I CUMULATIVE WORLDWIDE CATEGORY SUMMARY AS OF XXXXXXXX 19XX — PAGE 1 XXXX

PRODUCT CATEGORY	OPENING INVENTORY	ISSUES	RECEIPTS COMMERCIAL	RECEIPTS FROM DoD	CLOSING INVENTORY	AVERAGE DAILY ISSUES
AVIATION GASOLINES	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX
JET FUELS	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX
DISTILLATES	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX
AUTOMOTIVE GASOLINES	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX
RESIDUALS	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX
HEATING FUEL - DISTILLATES	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX
HEATING FUEL - RESIDUALS	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX
TOTAL - HEATING FUELS	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX
GRAND TOTAL ALL CATEGORIES	X,XXX,XXX,XXX	X,XXX,XXX,XXX	X,XXX,XXX,XXX	X,XXX,XXX,XXX	X,XXX,XXX,XXX	XX,XXX,XXX

FORM AD-630 (9-73)

FIGURE 4-30

CUMULATIVE WORLDWIDE SUMMARY REPORT



DD PROG YY
DFSC-XXXXXXX-XX

DEIS I CUMULATIVE WORLDWIDE SUMMARY REPORT
AS OF XXXXXXXX 19XX

PAGE XXXXX

PRODUCT CODE		OPENING INVENTORY	ISSUES	RECEIPTS COMMERCIAL	RECEIPTS FROM DoD	CLOSING INVENTORY	AVERAGE DAILY ISSUES
XXX	RETAIL	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX
XXX	DFSC	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX
XXX	TOTAL	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX
GRAND TOTAL - ALL PRODUCTS							
	RETAIL[1]	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX
	DFSC[2]	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX
	TOTAL[3]	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX

[1]This total is calculated by summing all the Retail lines for all the Product Codes.

[2]This total is calculated by summing all the DFSC lines for all the Product Codes.

[3]This total is calculated by summing all the Total lines for the Product Codes, It must also equal the sum of the total Retail and DFSC values.

FIGURE 4-31

CUMULATIVE CONUS SUMMARY REPORT

DD MMM YY DEIS I CUMULATIVE CONUS SUMMARY REPORT PAGE XXXX
MONTH OF XXXXXXXXX 19XX

PRODUCT CODE		OPENING INVENTORY	ISSUES	RECEIPTS COMMERCIAL	RECEIPTS FROM DoD	CLOSING INVENTORY	AVERAGE DAILY ISSUES
XXX	RETAIL	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX
XXX	DFSC	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX
XXX	TOTAL	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX
GRAND TOTAL - ALL PRODUCTS							
	RETAIL[1]	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX
	DFSC[2]	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX
	TOTAL[3]	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	X,XXX,XXX

[1]This total is calculated by summing all the Retail lines for all the Product Codes.

[2]This total is calculated by summing all the DFSC lines for all the Product Codes.

[3]This total is calculated by summing all the Total lines for the Product Codes. It must also equal the sum of the total Retail and DFSC values.

TABLE 4-16

NAVY/MARINE INSTALLATION SUMMARY

TAPE LAYOUT

Field Name Description	Number of Bytes	Field Location From	To
DoDAAC	7	1	7
DoDAAD	6	1	6
TAC	1	7	7
FILLER	1	8	8
REGION	2	9	10
FILLER	1	11	11
STATE	2	12	13
FILLER	1	14	14
PRODUCT CODE	3	15	17
FILLER	1	18	18
FIRST QUANTITY ISSUED TO	6	19	24
FILLER	1	25	25
SECOND QUANTITY ISSUED TO	6	26	31
FILLER	1	32	32
QUANTITY TO DoD & OTHER	6	33	38
FILLER	1	39	39
PRIMARY USE	6	40	45
FILLER	1	46	46
SECONDARY USE	6	47	52
FILLER	1	53	53
TERTIARY USE	6	54	59
FILLER	1	60	60
SERVICE USE	6	61	66
FILLER	1	67	67
SERVICE USE	6	68	73
FILLER	1	74	74
INSTALLATION NAME	40	75	114
FILLER	1	115	115
JULIAN DATE REPORT CYCLE	5	116	120
JULIAN YEAR	2	116	117
JULIAN DAY	3	118	120
FILLER	1	121	121
MAJOR COMMAND	20	122	131
FILLER	1	132	132
SERVICE	1	133	133
FILLER	14	134	150

recording mode is F. This tape is a 7-track, unlabeled, even parity, 800 BPI. It should be mailed to:

David Taylor Ship Research and Development Center
Code 2705
Annapolis, Maryland 21402

4.4.9 Ad Hoc Reports

This function will provide macros to extract data from the DEIS I data base.

4.4.9.1 Purpose

Queries to the DEIS I data base from users other than the system operator will be of two types. One type of query is simply to retrieve certain data elements, based on user-specified selection criteria, and display the data. At times, simple arithmetic operations may be requested on the data. For this type of ad hoc report, the macros should assign any files, invoke any processors, and assist the user to create query statements.

The second type of query is to extract and store selected data elements for further processing by statistical package software such as SPSS. In particular, linear regression, time series, cross tabulation, and one-way analysis of variance statistical procedures will be performed on selected data elements.

4.4.9.2 Data Input

The user should provide a minimum of data to produce ad hoc reports. Defaults for table headings should exist. The user should be allowed to direct the output from the session.

The following are samples of the queries that may be requested.

- Display the data for DoDAAC = XXXXXX, Date = MMYY, Product Code = XXX.
- What is the total consumption of jet fuels (or automotive gasoline) for quarter 2 of the current fiscal year (or of last year)? Multiply this number by 42 to give total consumption in gallons.
- What is the percent change in total consumption (or average daily consumption) for Major Command = X---X, between this month and this month a year ago (or this quarter and the previous 5 quarters) for distillates (or fuel oil)?
- What is the total consumption for each Service for the past 12 months? Multiply this by the current fuel price (input value).

4.4.9.3 Output

Output will be printed on the originating terminal, directed to another (high-speed) printer, or saved in a file for further processing. In addition, at the user's option, the statements used to generate the query may be saved for future use and modification.

SECTION 5. DEIS II DESIGN DETAILS

The overall requirement for the DEIS II subsystem is to provide data and reports for easy and accurate monitoring of utility energy consumption within DoD. With this general design criterion as a guideline, the following requirements were developed. First, DEIS II data will be maintained on an unclassified system and use a DBMS that supports on-line queries through standard data base retrieval routines. Second, the DBMS will provide the capability to add and delete data element fields when new requirements arise. Third, DEIS II data editing, including both format and reasonableness criteria, will provide increased accuracy. Fourth, code translation capabilities and ad hoc report generation procedures will be included in DEIS II to increase the readability of reports and the responsiveness of the system. Finally, DEIS II data reporting requirements will request data in the unit of measurement commonly used for consumption so that data collection is simplified. The specific automated functions designed to meet these DEIS II requirements are described in the following paragraphs.

5.1 General Operating Procedures

5.1.1 Data Requirements

Most DEIS II data will be collected by the field activities in the MEB format shown in Appendix C. The capability must be provided to input data to the DEIS II data base on-line, as well as from MEB cards and card images on magnetic tape. Edit procedures will prevent double entry of data. Duplicate records will be printed on an error report (called a Transaction Proof Listing).

All data submitted from a field activity will be handled as add transactions unless data for the same date, installation and product exist in the data base. The DEIS system operator (DFSC-CB) will retain a listing (for one year) of the data submitted from the field activities, either the DD 173 message form or a listing of validated punched cards received via AUTODIN.

5.1.2 System Scheduling Requirements

DEIS II has a monthly reporting cycle. Data are reported as of 0800 hours local mean time on the last day of each month. Data are due at DLA, Cameron Station, by 0800 hours on the 28th day of the following month. Initial data editing, including production of the Nonreporting Activities Report, should be completed by 0800 hours on the 29th of the month. Data from late reporters and changes due to the initial editing and preliminary reports will be entered between the 29th and the 6th of the next month. Final reports will be provided to the Defense Energy Policy Office and the designated components not later than the 10th day of the month. These final reports will reflect end-of-month data as of five to six weeks previously. DFSC-CB will initiate the request for these final reports. Table 5-1 summarizes the processing cycle for DEIS II. This schedule shows an optimal processing cycle and may be revised after the system is operational.

TABLE 5-1

DEIS II PROCESSING CYCLE

Day of the Month	Responsible Party	Actions Required
last	Activity/Installation	Collect DEIS II data.
1-27	Activity/Installation	Submit DEIS II data for transmission.
28	DLA	After 0800 hours, separate DEIS data produce tape, and send to AFDSC.
29	AFDSC*	Run initial editing and update. Send list of errors and non-reporters to DFSC-CB.
29	AFDSC	Process weather/I&H data, update data base.
29	DFSC-CB	Notify non-reporters, start error corrections.
30-8	DLA	Separate any remaining DEIS data, produce tape, and send to AFDSC.
9	AFDSC*	Run edit on new data and corrected data. Update data base. Deliver report tapes to DLA.
10**	DLA	Produce, bind, and deliver reports.
11-15	DFSC-CB	Enter remaining corrections and late reports. Request edit, update, report cycle, if necessary.
15	AFDSC, DFSC-CB	Archive data from on-line data base.
all	DFSC-CB	Maintain tables and coded information. Enter corrections to data base.

* AFDSC will plan to provide less than 24-hour turnaround on jobs submitted, however, machine availability/scheduling may delay the output.

** DEIS II reports delivered approximately 40 days after the activity "cut-off" date, that is, the reports reflecting January consumption are available by March 10.

5.1.3 Data Base Back-up Procedures

The data base back-up procedures for DEIS II are the same as those for DEIS I (see 4.1.3).

5.1.4 Recovery Procedures

Restart and recovery procedures will conform to standard AFDSC procedures. Transaction logging, retention of DEIS II data tapes, and the data base back-up will permit recovery of a damaged data base. AFDSC will develop such procedures, consistent with their operating procedures.

5.1.5 Access to Archived Data

Occasionally data not contained in the on-line data base will be needed. Procedures (using INQUIRE capabilities) will exist to create a temporary INQUIRE data base containing archived data for use in on-line data retrieval and data reporting.

5.1.6 DEIS II Data Monitoring

The Defense Energy Policy Office has management responsibility for DEIS II, and AFDSC has programming responsibility. DLA manages automated operations through DFSC-CB. The DEIS system operator is authorized direct communication with all reporting activities to request late reports and to verify reported data. The DEIS system operator is responsible for making (with Defense Energy Policy Office authorization) all changes to data more than 120 days old. DFSC-CB also coordinates with AFDSC any changes to coded or tabular information in the data base, and works with the Defense Energy Policy office when programming changes to DEIS are anticipated.

5.2 DEIS II Subsystem Logic Flow

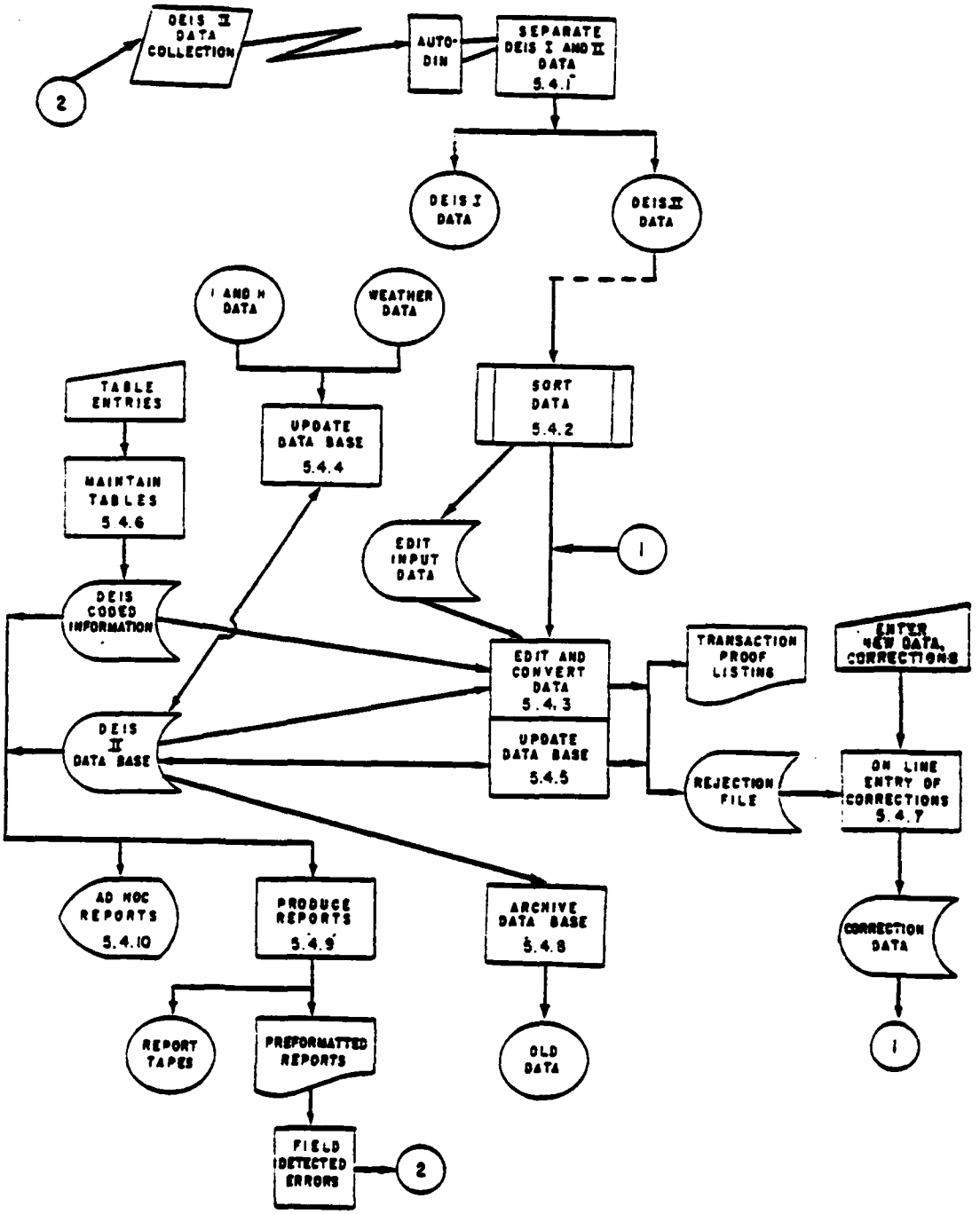
The general system flow of DEIS II is designed to provide functions to process and access utility usage data in a timely manner. The flowchart in Figure 5-1 illustrates the DEIS II subsystem logical flow.

Source data enter DEIS II from energy-consuming facilities through AUTODIN, the DD173 message form, or other communications media. DEIS data are collected at DLA, Cameron Station, where DEIS II data are separated from other data and recorded on magnetic tape. The DEIS II tape is then transmitted to AFDSC for further processing.

At AFDSC, DEIS II data are sorted and edited for format and validity (compared to data already in the data base). Records believed to be in error are placed on both the Transaction Proof Listing and the Rejection File for review. All data with a date older than 120 days are placed on the Transaction Proof Listing and the Rejection File for review, acceptance or rejection, and resubmission of data. In addition, those activities which have not submitted DEIS II data are identified and reported. Data which pass the edits are converted to the INQUIRE data base format, and the data base is updated.

FIGURE 5-1

DEIS II SYSTEM FLOWCHART



Data records believed to be in error are corrected and resubmitted for editing, conversion, and data base updating. DEIS II data relating to installations, such as name, address, and conversion factors, are maintained on an INQUIRE coded information file.

DEIS II reports will be produced once the data reporting cycle is completed or by the 10th of each month. Ad hoc reports and data base queries will be made on an as-needed basis. Errors in reports detected by data submitters can be corrected via AUTODIN or by notifying the system operator.

The data base will contain detail data for installation (DoDAAC) utility usage for the most recent 13 months and for the baseline (1975) 12 months. Quarterly summary data for each installation and each utility product used for the 5 years prior to the earliest of the most recent 13 months. Each month, the appropriate monthly and quarterly data will be removed from the on-line data base and saved off-line for possible reload and retrieval.

5.3 Subsystem Data

This subsection describes inputs, outputs, and the data base used for DEIS II.

5.3.1 Inputs

The data elements used in DEIS II, including number, name, source, format, and acceptable values, are described in Appendix B. Table 5-2 shows the layout of the data (monthly) on existing master files for the fiscal years 1975-1980. The 1975 and 1980 data will have the Julian date converted to month and year. The 1976 through 1979 data will be accumulated into quarterly data. For Air Force activities, the Service Use and Funded Consumption fields must be interchanged. No other data editing is necessary for these data. The tape for each fiscal year is 7 track, unlabeled, even parity, 800 BPI. The record size is 170 and the blocking factor is 20.

All data items from the field and the Weather Service data will be submitted monthly according to the schedule described in 5.1.2. Approximately 7,825,000 characters will be submitted monthly. Housing data (approximately 1,700,000 characters) will be submitted annually in October. Coded information items will be submitted on an as-needed basis.

5.3.2 Outputs

The DEIS II subsystem generates the reports listed below. More detail on their formats is contained in the function descriptions.

- Transaction Proof Listing
- DEIS II Monthly Activities Not Reporting
- DEIS II Activities Reporting Changes
- Monthly/Quarterly Region and State Summary

TABLE 5-2

DEIS II MASTER FILE LAYOUT

DATA ELEMENT NUMBER	DATA ELEMENT DESCRIPTION	RECORD POSITION	FIELD TYPE *
12	DoDAAC	1-6	Alphanumeric
NA	TAC	7	Alphanumeric
	Filler	8	
27	Region Code	9-10	Coded information
	Filler	11	
33	State Code	12-13	Coded information
	Filler	14	
24	Product Code	15-17	Alphanumeric
	Filler	18	
17	Inventory	19-27	Alphanumeric
	Filler	28	
NA	Baseline 73	29-37	
	Filler	38	
8	Consumption	39-47	Numeric
	Filler	48	
14	Service Use 1	49-57	Numeric
	Filler	58	
34	Service Use 2	59-67	Numeric
	Filler	68	
16	Installation Name	69-108	Coded information
	Julian Year	109-110	Alphanumeric
	Julian Days	111-113	Numeric
	Filler	114	
18	Major Command	115-124	Coded information
	Filler	125-146	
35	Variance Code	147-148	
30	Service Code	149	Coded information
NA	Report Code	150	
NA	Dummy Record Code	151	
NA	Service 75 Consumption	152-160	Actual 1975 data used
	Filler	161	
NA	DSA 75 Consumption	162-170	

* Alphanumeric is Picture X, Numeric is Picture 9.

- Monthly Utilities by DOE Region/CINC
- Energy Consumption Report
- Conservation Performance Report
- Building Conservation Report
- Energy Use Report
- Ad Hoc Reports

5.3.3 Data Base

The DEIS II data base will be constructed using the INQUIRE DBMS. Figure 5-2 shows a schema of the data base. It is expected that the on-line data base will contain (not including any overhead) approximately 19,340,000 characters. See Appendix B for descriptions of the data items.

5.4 DEIS II Subsystem Program Descriptions

DEIS I subsystem programs are described in the following paragraphs. The functions are presented in the sequence in which they will typically be used during a DEIS II reporting cycle.

5.4.1 Separate DEIS I and DEIS II Data

The processing required for this function exists at DLA and will be used without modification. This function is explained in more detail in 4.4.1.

5.4.2 Sort DEIS II Data

The processing required for this function includes a standard ascending sort on five data fields.

5.4.2.1 Purpose

The purpose of this function is to order the data elements for more efficient editing of the data and updating of the data base in subsequent processing steps.

5.4.2.2 Data Definition

The following data will be used as sort keys:

DoDAAC
Reporting Date (Year)
Reporting Date (Month)
Product Code
Card Number

A more detailed description of these data items can be found in Appendix B.

FIGURE 5-2

DEIS II SCHEMA

	length
DoDAAC*	6
-Service	1
-Major Command	10
-DOE Region	2
-State/Country	2
	21

DATES (4 characters - 45 occurrences)

PRODUCTS	3	BUILDINGS		ENVIRONMENT	
Inventory	8	Class	2	Degree Days (heat)	4
Consumption	8	Size	1	Degree Days (cool)	4
Variance Code	2	Number Owned	6	Personnel Days (resident)	6
Funded Consumption	8	Number Leased	6	Personnel Days (industrial)	6
Btu Content	6	Number in use before 1975	6		
Component Use	8	Number brought in after 1975	6		
Weight (refuse only)	8	Total square Footage	7		
Date of Update	6				
Correction Code	1				
TOTAL	55	TOTAL	34	TOTAL	20

Average of 3 products per date = 273 characters per date
45 dates = 12,285 per DoDAAC

Assuming an average of 3 products per DoDAAC, data base size (excluding building data) is 14.8 million characters.

If class of building is kept annually only, the size of the data base is ((122 + 20) x 45 (32 x 3 x 13 x 7)) x 1200 = 19.43 million bytes.

* Keys are underlined

5.4.2.3 Processing Logic

All records submitted from the field will be sorted and passed to the edit and convert data function described in 5.4.3.

5.4.2.4 Output

The output of this function is a file containing sorted records.

5.4.3 Edit and Convert Data

This function will test MEB card data items for format, completeness, and reasonableness. It will convert any units not reported in Btu to Btu equivalents. In addition, this function will check whether the data were previously submitted and convert data which pass the edits to the format required to update the DEIS II data base.

5.4.3.1 Purpose

The purpose of this function is to edit/validate DEIS II product information, to produce a Transaction Proof Listing and file of those records which fail the edit criteria, and to format acceptable data for updating the data base.

5.4.3.2 Data Definition

DEIS II data items fall into four categories. The first category (described in this section) is the energy usage data received monthly from field activities. The second category is the degree day data received monthly from the National Weather Service. The third category consists of annual building-related data received as a by-product of the Services' real property inventory. The fourth cateogry is coded information, which is changed infrequently. The second and third categories are defined in 5.4.5 and the fourth is defined in 5.4.6. All data items are described in more detail in Appendix B.

5.4.3.3. Processing Logic

A previously edited, revised, and/or corrected record will contain an "E" in position 79. If this product record fails a second edit, it will be placed on the Rejection File and the Transaction Proof Listing (with a message that the second edit failed). It will also update the data base. In this way, correct data that fail the edit criteria for the data can be processed. The following paragraphs specify the edit criteria for the data common to both MEB card types and the MEB-specific data listed in Table 5-3. Figure 5-3 provides a flow chart of the major processing steps in the data edit and conversion function.

5.4.3.3.1 Common Data Edits

There are three MEB data cards, MEB 2, MEB 4 and MEB 5. (There is no MEB 3 card.) Data may be offset by one column because the space is missing between the card type (MEB) and the card number. Similarly, there may be a missing blank or an extra blank between the card number and the date, the date and the DoDAAC, or the DoDAAC and the product code. If this is the case, insert or

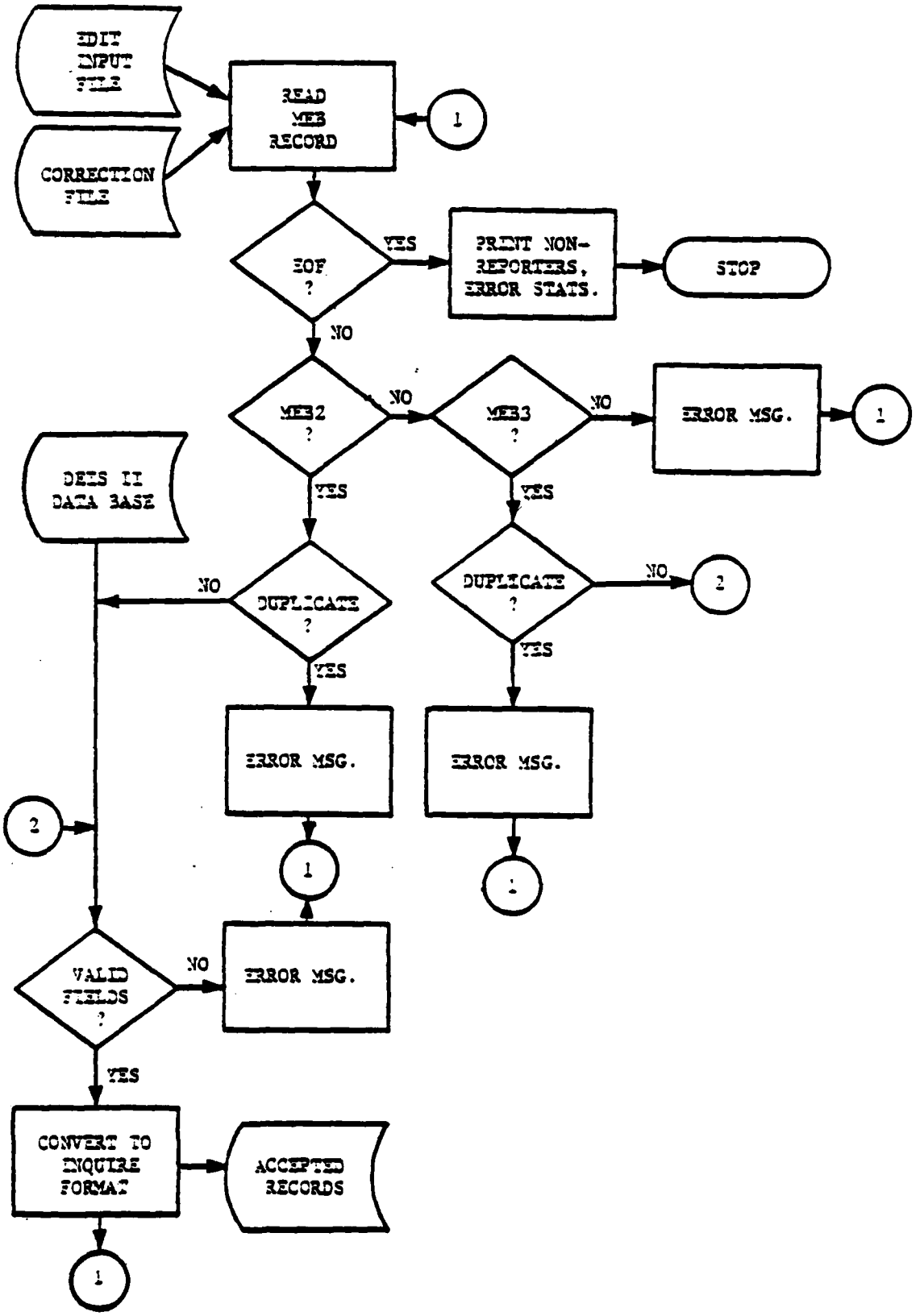
TABLE 5-3

DEIS II DATA EDITS

Card	Data Element Description	Card Column	Edit Criteria/Comments
MEB 2		22	Must be blank
	Inventory	23-30	Numeric, within 10% of value of inventory a year ago
		31-33	Must be blank
	Btu Conversion	34-39	Numeric, zero, or blank. If numeric positive, within 10% of standard value for this product
		40	Must be blank
	Consumption	41-48	Numeric, within 10% of value of this month a year ago
		49	Must be blank
	Variance Code	50-51	Numeric or blank. If numeric must be valid code for this Service
		52	Must be blank
	Funded	53-60	Numeric, less than or equal to Consumption
	Component Use	61	Must be blank
		62-69	Numeric or blank
		70-80	Not used by DEIS II
MEB 4		22	Must be blank
	Personnel-Qtr	23-28	Numeric or blank
		29	Must be blank
	Personnel-Ind	30-35	Numeric or blank
		36	Must be blank
	Degree days, cooling	37-40	Numeric or blank. If numeric, must be within 10% of Weather Service report
		41	Must be blank
	Degree days heating	42-45	Numeric or blank. If numeric, must be within 10% of Weather Service report
		47-80	Not used by DEIS II

FIGURE 5-3

DEIS II EDIT AND CONVERT DATA



delete the blank before checking the validity of the data. A card image of the data as submitted and the action taken will be printed on the Transaction Proof Listing. Other misalignments will be errors.

Three data elements are common to the MEB data cards: DoDAAC, Reporting Date, and Product Code. In all instances, the DoDAAC being submitted must match a DoDAAC in the data base. If there is no match, the input record will be written on the Rejection File and printed on the Transaction Proof Listing with a message such as DoDAAC NOT ON FILE.

The date (month, year) of each MEB card must be less than or equal to the date of the period being reported. To facilitate this validation, the correct date may be submitted on a parameter card. If the input date is more than four months older than the reporting period date, the record/records must be printed with an error message indicating an OUT-OF-DATE-CHANGE.

If the input date is ahead of the correct date (such as 0491 when the correct date is 0481), the record will be written on the Rejection File, and printed with an error message such as INVALID DATE.

The Product Code on the MEB 2/4 must match acceptable/valid Product Codes established on the coded information portion of the data base. If there is no match, write the record on the Rejection File and print it on the Transaction Proof Listing with a message INVALID PRODUCT CODE.

There are no further edits of the MEB 5 card. Its use is described further in 5.4.9.3.6.

5.4.3.3.2 MEB-Specific Edits

All data will be treated as new (add) transactions unless there is a "C" in column 80, a record already in the data base, or "DDD" (delete code) in columns 1-3. Every add transaction will be checked for duplication either of previously reported data in the month (for example, two MEB 2 cards with the same Product Code DoDAAC, and Date) or duplication of a data base record. If there are two MEB 2 add transactions with the same DoDAAC, Product Code and Date, the second record will be written on the Rejection File and printed on the Transaction Proof Listing with a message DUPLICATE. If all 80 columns are duplicated, the second transaction will be ignored. If the add transaction matches a record on the data base exactly, the add transaction will be ignored. If the add transaction matches a record on the data base on just the DoDAAC, Product Code, and Date, treat the transaction as if there were a "C" in column 80.

There may or may not be a MEB 4 card submitted. There should be only one MEB 4 card submitted from each DoDAAC. If there are multiple MEB 4 cards for the same date and DoDAAC, print an error message such as DUPLICATE, print the card images, and place the record on the Rejection File.

All numeric quantity fields on the MEB 2/4 will be validated. If the field is not numeric, print the entire input record with a message indicating FIELD NOT NUMERIC.

If blank columns of the MEB 2/4 are filled, this indicates an error, and the input record should be placed on the Rejection File. The input record will be

placed on the Transaction Proof Listing with a message such as DATA OVERLAP.

Validation of other data on the MEB 2/4 input records is shown in Table 5-3. The Consumption and Funded fields may need to be converted from reported units to Btu before the edit criteria are met. See 5.4.3.3.6 for conversion criteria. All records in error will be printed on the Transaction Proof Listing. Records containing an error will not update the data base unless they have been previously edited and contain an "E" in column 79.

5.4.3.3.3 Change Transaction Edits

Change transactions (cc 80 = C or a MEB card for a record in the data base) must match a record in the data base on DoDAAC, Product Code and Date. If no match is found, print a message beside the transaction on the Transaction Proof Listing indicating UNMATCHED. If the change matches a data base record, overlay the old data with the new data. This overlay will not, however, be accomplished before all of the validation identified for an add transaction is performed. If the change data fail the edits, reject the new data, print the data as an error on the Transaction Proof Listing, and place it on the Rejection File.

5.4.3.3.4 Delete Transaction Edits

Delete transactions (cc 1 - 3 = DDD) must match on the DoDAAC, Date, and Product Code. If an exact match does not occur, print the delete transaction on the Transaction Proof Listing with a message indicating UNMATCHED and place the transaction on the Rejection File. If there is an exact match, delete the data associated with the DoDAAC, Date, and Product Code combination from the data base. Beside the transaction on the Transaction Proof Listing, print a message indicating DATA BASE DELETION and the data which were deleted.

5.4.3.3.5 Non-Reporting Activities Edits

Those activities (DoDAACs) in the data base for which no data were received should be printed on the Activities Not Reporting listing. This listing will print the DoDAAC and its header data (Region/CINC Code, State/Country Code, Installation Name, Major Command and Service/Agency Code for the DoDAAC). These data will be taken from the coded information file. In addition, all the Product Codes reported for this DoDAAC the previous month will be listed.

Should the activity not reporting be one that has not reported for more than the prior month, print all of the header data but leave the Product Code field blank. If the activity has not reported for 3 consecutive months, also print a message such as REVIEW HEADER. Activities not reporting for more than 3 consecutive months will be considered closed or inactive.

Activities not reporting the same Product Codes as in the prior month will be reported on the Activities Reporting Changes listing. This listing will be developed by comparing data reported for a DoDAAC in the current month to data reported for that same DoDAAC in the prior month. If a DoDAAC reported a product in the prior month, but not in the current month, that DoDAAC and Product Code will be printed with a message such as NON-SUBMISSION.

If a DoDAAC reports a product not reported in a prior month, the data base

will be updated (if all edits are passed), and the line will be printed as above, identified as a NEW-SUBMISSION.

5.4.3.3.6 Conversion

For products not reported in Btu, the Inventory, Consumption, and Funded fields will be converted to Btu. These fields will be stored in the data base in Btu, not in the original reported units. The calculations, Consumption x Btu Content = Consumption and Funded x Btu Content = Funded, will be rounded to the nearest whole number. If a Btu Conversion Factor is input, it will be used. If the Btu Conversion Factor is blank (zero), the standard conversion factor will be used. These standard conversion factors are given in Table 5-4.

Data which pass the edits will be converted from MEB card format to the format required for INQUIRE data base updating. Data that fail the edit criteria will be written on the Transaction Proof Listing and the Rejection File in their original units.

5.4.3.4 Outputs

There are six outputs from this function:

1. Records which have passed the data edits and are converted to INQUIRE data base update format will be written to the data base. As many as 2400 records may pass the data edits at one time.

2. Records which have passed the data edits will be printed in DoDAAC order on an Accepted Records listing. A sample of this report layout is given in Figure 5-4.

3. Records which fail the data edits will be written on the Rejection File. As many as 1000 records may fail the data edits at one time. Because of this volume, this file should be arranged for selective as well as sequential access.

4. Records which fail the data edits will be printed on the Transaction Proof Listing. This listing will contain the image of the record on the Rejection File and the appropriate error messages. Multiple error messages may be printed. A sample of this report layout is given in Figure 5-5.

5. Activities which did not submit data, or submitted changes in Product Codes, will be printed on the DEIS II Monthly Activities Not Reporting and DEIS II Activities Reporting Product Changes listings. Samples of these reports are given in Figures 5-6 and 5-7.

6. Error statistics showing the number of times each error message is printed, will be produced at the end of each edit run. This listing will be sent to the system operator, DFSC-CB.

5.4.4 Update Data Base--Data from Other Systems

Two types of data from other systems will be used to create part of the DEIS II data base. The first type of data is related to heating and cooling degree

TABLE 5-4

STANDARD CONVERSION FACTORS

Product Code	Reporting Unit	Btu Conversion Factor
ELC	MWH	11,600,000 Btu/MWH
NAG	SCF	1031 Btu/SCF
DF1, DF2, FS1, FS2 KSN, KDS, NSF, FSX	Barrels	5,825,000 Btu/Barrel
FS4, FS5, FS6, FSL	Barrels	6,287,000 Btu/Barrel
SHW	Pounds of Steam	1340 Btu/Pound of Steam
ANC	Short Ton	24,580,000 Btu/Short Ton
COL	Short Ton	25,400,000 Btu/Short Ton
PPG	Gallon	95,000 Btu/Gallon
PHO	KWH	11,600 Btu/KWH
SOL	Btu	N/A
WND	KWH	11,600 Btu/KWH
WUD	Short Ton	17,000,000 Btu/Short Ton
SLP	Barrels	5,000,000 Btu/Barrel
GEO	Pounds of Steam	1340 Btu/Pound of Steam
HYD	KWH	11,600 Btu/KWH
RDF	Short Ton	6,000,000 Btu/Short Ton
FCL	KWH	11,600 Btu/KWH

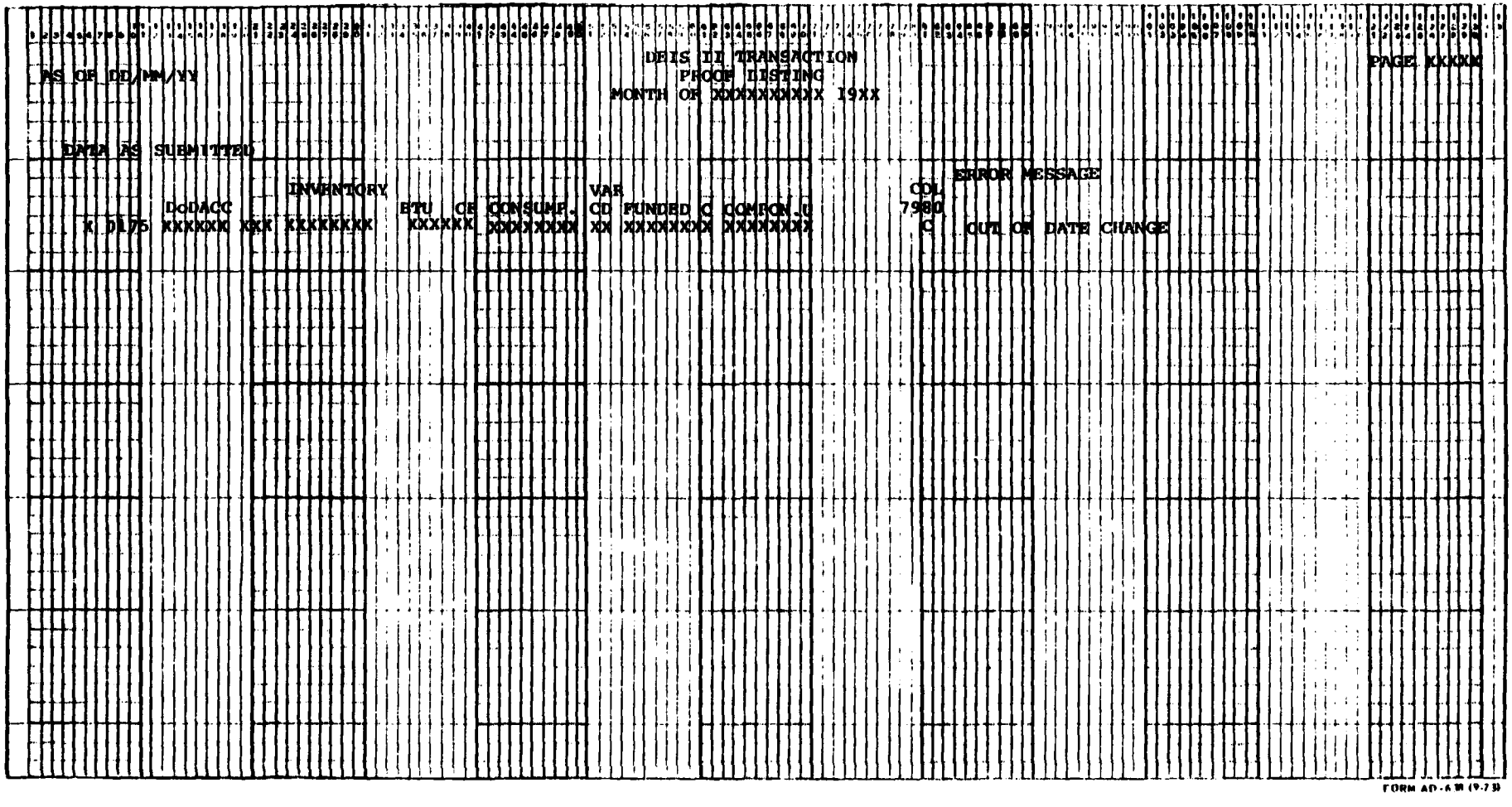
FIGURE 5-4

ACCEPTED RECORDS LISTING

```
AS OF DD MMM YY                                        ACCEPTED RECORDS                                          PAGE XXXXX

                                                    MONTH OF XXXXXXXXX 19XX

                       PROD
           MMYY DODAAC CODE INVEN.   BTU       CONSUM.  VAR FUNDED   SERVICE
     MEH X XXXX XXXXXX XXX XXXXXXXX XXXXXXXXX XXXXXXXX XX XXXXXXXX XXXXXXXX

     MER 2 0380 N00246 ELC 00000000 000011.6  00004202 01 00001900 00000700
     MER 2 0380 N00246 PRG 00001050 00096000  00000250 00 00000250 00001200
```

FIGURE 5-5

TRANSACTION PROOF LISTING



FORM AD-A (9-73)

FIGURE 5-6

DEIS II ACTIVITIES NOT REPORTING

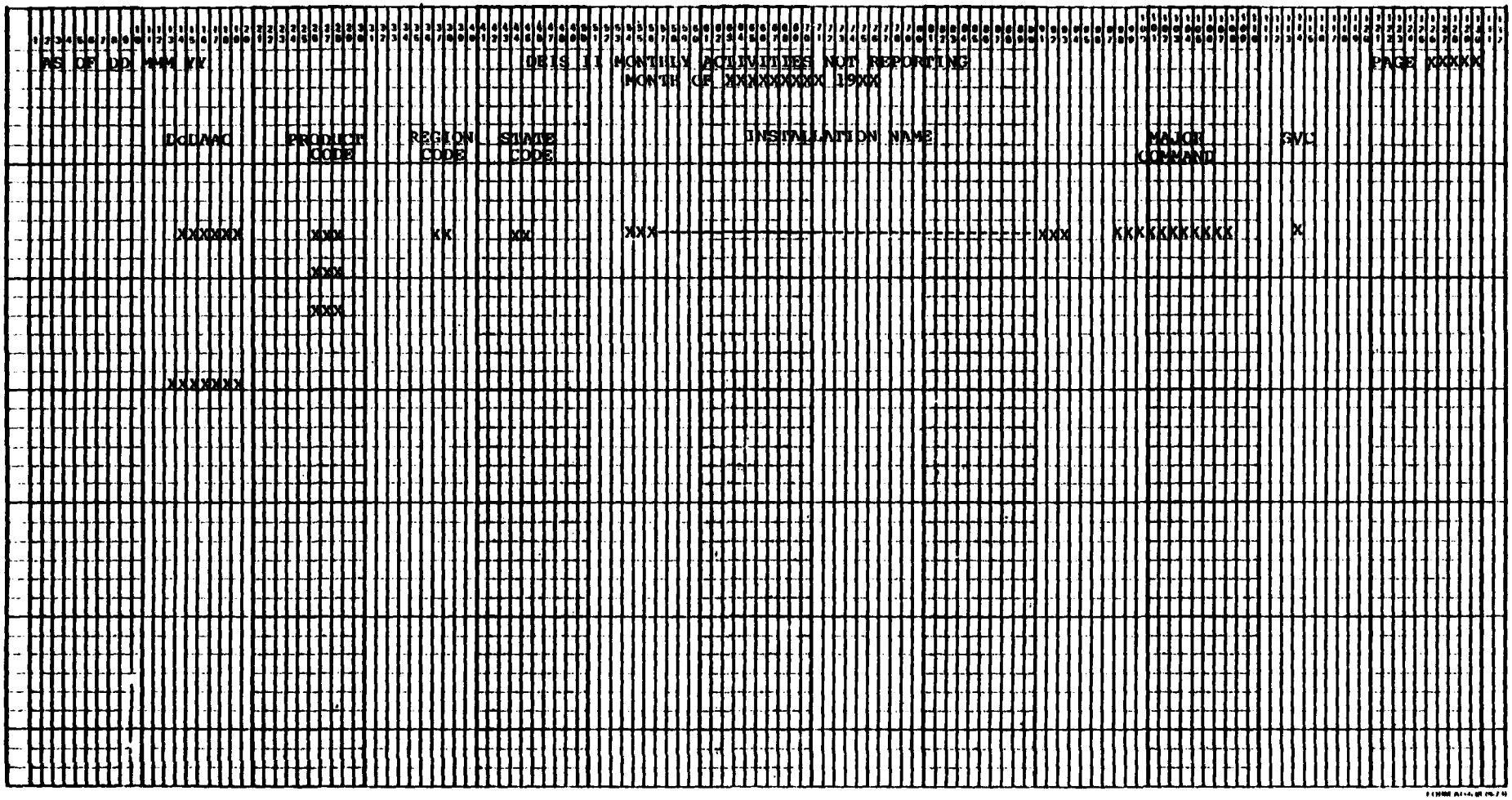


FIGURE 5-7

DEIS II ACTIVITIES WITH PRODUCT CHANGES

AS OF DD MMM YY

DEIS II ACTIVITIES REPORTING PRODUCT CHANGES
MONTH OF XXXXXXXXX 19XX

DODAAC	INSTALLATION NAME	SERVICE CODE	PRODUCT CODE	REGION CODE	STATE CODE	MESSAGE
XXXXXX	XXX----------	XXXX	X	XXX	XX	XXX NON - SUBMISSION
						NEW SUBMISSION

days at each reporting installation, and the second type is related to the buildings on each installation Degree day information will be processed monthly. Building data will be processed annually in October. The actual data base update is performed mainly through features of the generalized DBMS.

5.4.4.1 Purpose

The purpose of this function is to add data needed in DEIS II but collected by other reporting systems. Data need be reported by an installation/activity only if it is known that data from the central source are inaccurate (for example, the climate at a base may differ from the climate at the nearest weather station).

5.4.4.2 Data Definition

The data items input to this function are shown in Table 5-5. The degree day data will be received on magnetic tape from the National Weather Service. This tape will contain the heating and cooling degree days for weather stations identified by a six-digit number. A table will be provided by September 1, 1980 showing the correspondence of weather station identifiers to DoDAACs. Both heating degree days and cooling degree days are four-digit numeric (positive or zero) fields. The data input tape will contain 14-character records (identifier--6, heating degree days--4, cooling degree days--4). There will be 20 records in a block. The tapes will be written by a Univac 1100 as unlabeled, even parity, 800 BPI.

The building data will be received from each of the Service/agency real property inventory tapes. The Services/agencies will provide an extract of the data needed. The tape layout and format are not known at this time. The tapes will contain the following fields: DoDAAC (6 characters), Building Class (5 digits), Building Size (9 digits), Building Ownership (1 character), and Building Date (4 digits) for each conditioned building on an installation/base.

5.4.4.3 Processing Logic

The weather station identifier and degree days will be read from the National Weather Service tape, and the corresponding DoDAAC or DoDAACs will be located by means of the table referred to in 5.4.4.2 If no data have been entered in the data base for the DoDAAC, both the heating and cooling degree days will be converted to the correct format and added to the data base. If degree days were reported by the DoDAAC and are in the data base, they will be left unchanged. The degree days for the current month will be compared to the degree days of the same month a year ago. If the difference between the yearly data is more than 10%, a message to that effect (HEATING (or COOLING) DEGREE DAYS MORE (LESS) THAN 10% ABOVE (BELOW) LAST YEAR) will be printed. The DoDAAC, date, current degree days and previous year's degree days will also be printed. Figure 5-8 shows the processing logic of the weather data update.

Building data will be added to the data base annually in October. Data for each installation will be subtotaled in the categories specified in Table 5-6. The subtotal fields will be converted to INQUIRE format and used to update the data base. If the difference between the new data and the previous year's data is more than 10%, a message to that effect will be printed. For example,

TABLE 5-5

DEIS II DATA FROM
OTHER SYSTEMS

Data Element Number	Data Element Description	Source	Edit Criteria/Comments
NA	Weather Station ID	NWS	Match a table of valid ID and translate to DoDAAC
7	Cooling Degree Days	NWS	Numeric, positive, or zero
15	Heating Degree Days	NWS	Numeric, positive, or zero
12	DoDAAC	I&H	Valid code on file
1	Building Class	I&H	Combined from Service Codes
4	Building Size	Computed	Small, medium, large
3	Number Owned	I&H	Number of owned buildings
2	Number Leased	I&H	Number of leased buildings
20	Number Old	I&H	Number of old buildings (Nov. 1978 or earlier)
19	Number New	I&H	Number of new buildings (since Nov. 1978)
31	Square Feet	I&H	Total square feet in each category

FIGURE 5-8

WEATHER DATA BASE UPDATE PROCESSING LOGIC

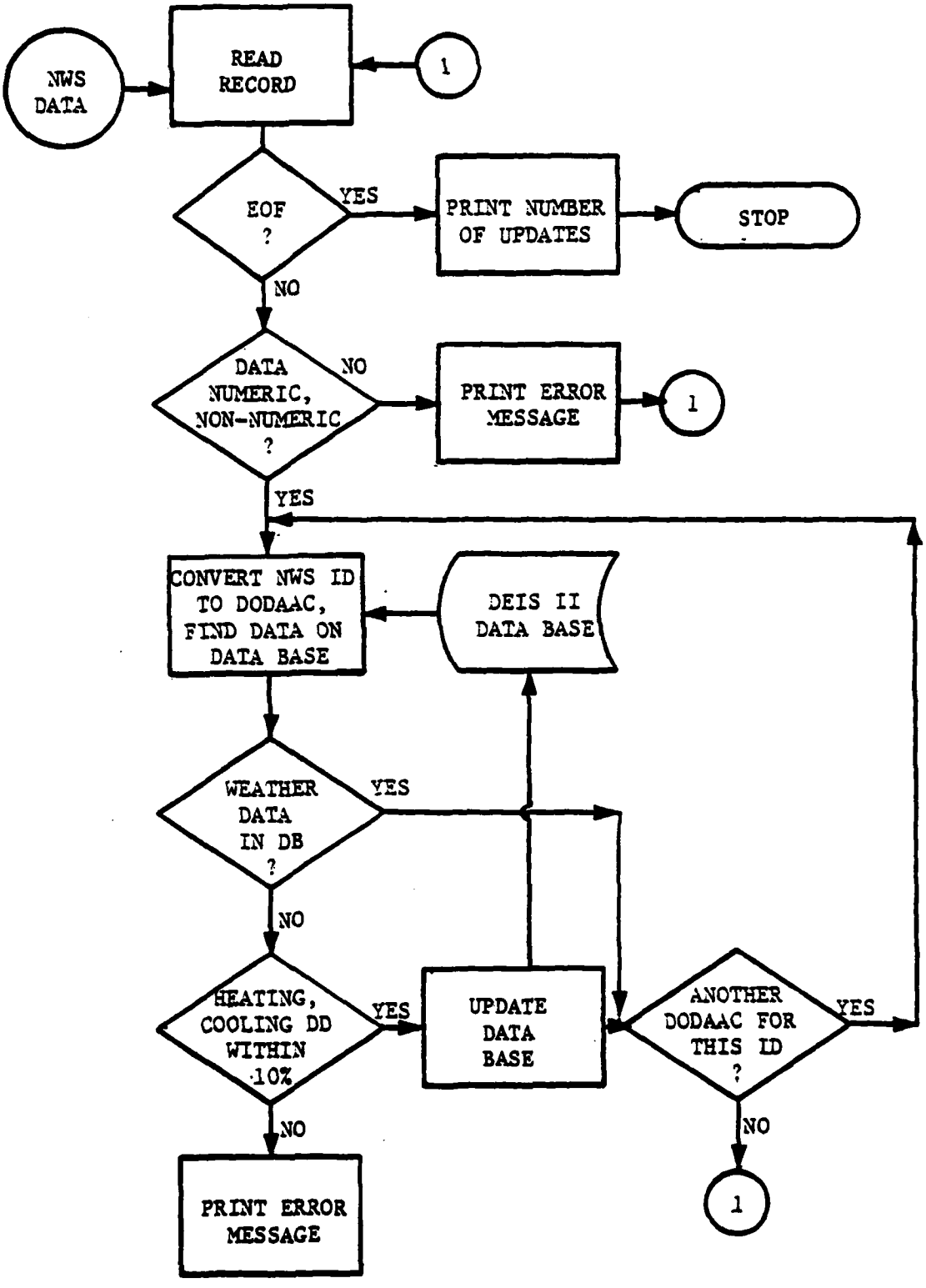


TABLE 5-6

BUILDING CATEGORIES

Category	Building Class	Age	Ownership	Size	Total Sq. Ft.[4]
001	Office	Old	Owned	S[1]	
002			Owned	M[2]	
003			Owned	L[3]	
004			Leased	S	
005			Leased	M	
006			Leased	L	
007		New	Owned	S	
008			Owned	M	
009			Owned	L	
010			Leased	S	
011			Leased	M	
012			Leased	L	
021	Hospital	Old	Owned	S	
022				M	
023				L	
024			Leased	S	
025				M	
026				L	
027		New	Owned	S	
028				M	
029				L	
030			Leased	S	
031				M	
032				L	

TABLE 5-6 (Cont.)

Category	Building Class	Age	Ownership	Size	Total Sq. Ft.[4]
041-052	School				
061-072	Other Institutional				
081-092	Housing		Same as for		
101-112	Storage		Categories		
121-132	Industrial		001-012 and		
141-152	Service		021-032		
161-172	Research and Development				
181-192	Utility				
201-212	Other				

[1]Under 1,000 sq. ft.

[2]1,000-30,000 sq. ft.

[3]30,000 or more sq. ft.

[4]The total (cumulative) number of sq. ft. for this category on the installation.

the building class, size, age category, and ownership category may be printed along with the number of buildings input and the number reported previously. The message may read MORE THAN 10% ABOVE (BELOW) LAST YEAR. Figure 5-9 shows the processing logic of the building data update.

In addition, all weather and building data will be numeric, non-negative integers. Data submitted which are non-numeric or negative will be printed with the appropriate error message. All data will be added to the data base unless they are non-numeric or negative.

5.4.4.4 Outputs

The outputs of this function are an updated DEIS II base and a Transaction Proof Listing containing the error messages specified above. Figure 5-10 gives a sample of the messages on the Transaction Proof Listing for this function. If a DoDAAC has weather or building data but is not on the DEIS II data base, an error message will be printed.

5.4.5 Update Data Base--Data from Activities

This function is performed through the generalized DBMS capabilities and provides for updating the data base with records that have passed the edits. The data base update will occur at least once a month, and possibly two or three times each month, because of changes and late reports.

5.4.5.1 Purpose

The purpose of this function is to add, change, and delete data in the data base. This includes the ability to add new data fields or delete existing ones through reorganization of the data base. (Such reorganization will only take place after consultation with users and AFDSC.)

5.4.5.2 Data Definition

The data items used in this function are shown in Table 5-3. A more detailed description of each data item can be found in Appendix B.

5.4.5.3 Processing Logic

Records that passed the edits described in 5.4.5 will be applied by means of the DBMS to the DEIS II data base in batch mode. The input records will be saved as a transaction log. Any data rejected by the DBMS will be placed on the Rejection File for subsequent data correction.

5.4.5.4 Output

The outputs of this function are an updated DEIS II data base, a Rejection File containing MEB data, and a Transaction Proof Listing containing MEB data and error messages.

5.4.6 Maintain Tables

Part of the DEIS II data base will contain clear (uncoded) text for the coded data and distribution lists for each report. There will also be a list of

FIGURE 5-9

HOUSING DATA BASE UPDATE PROCESSING LOGIC

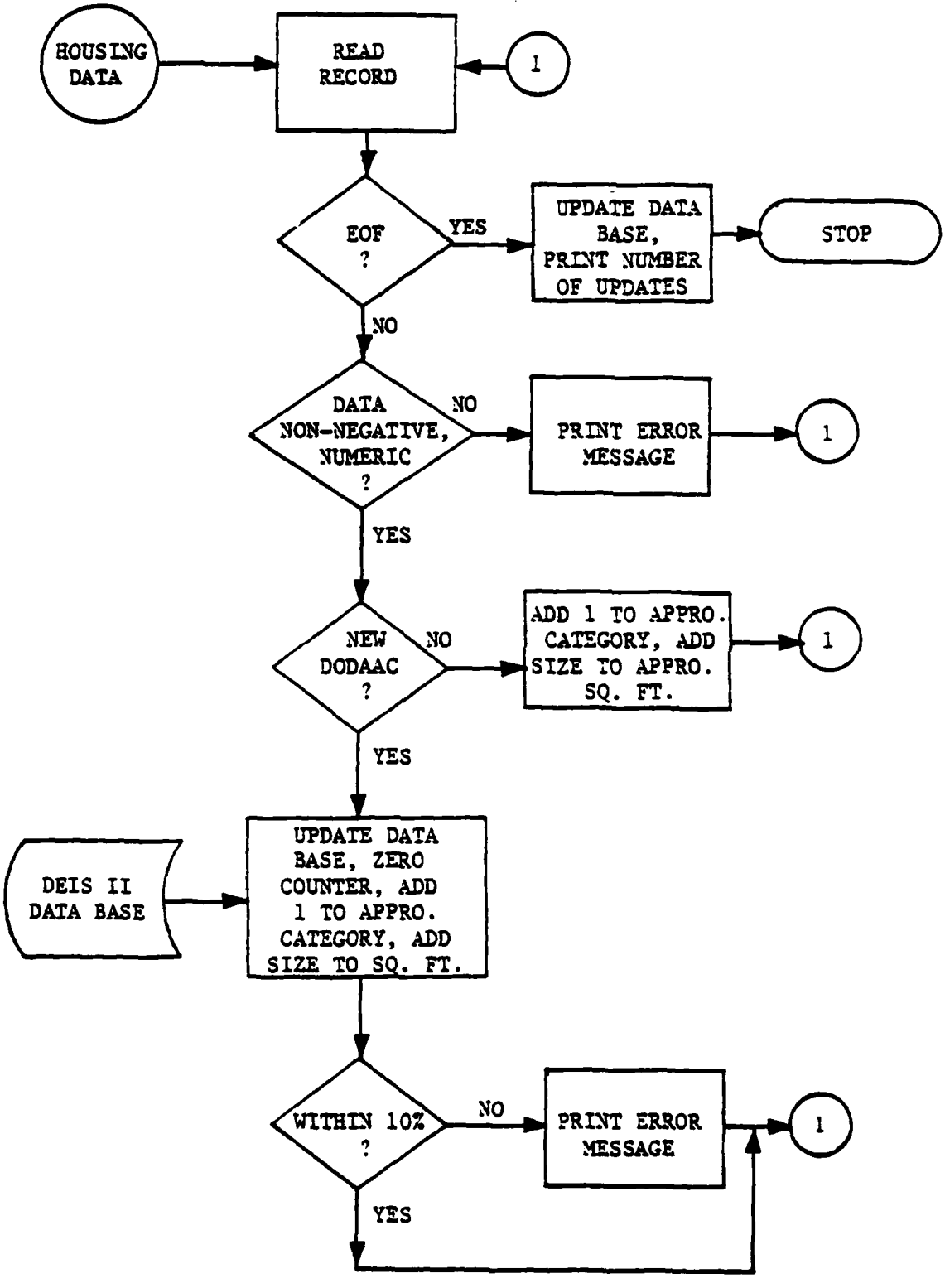


FIGURE 5-10

TRANSACTION PROOF LISTING (WEATHER/BUILDINGS)

AS OF DD MMM YY — DEIS II WEATHER TRANSACTION PROOF LISTING — PAGE XXXX

MONTH OF XXXXXXXXX 19XX

DATA AS SUBMITTED DODAAC	HDD	CDD	DATA FOR LAST YEAR HDD	CDD	ERROR MESSAGE
XXXXXX	XXXX	XXXX	XXXX	XXXX	X ... X
N08796	45	90	10	88	WARNING: DD MORE THAN 10% ABOVE LAST YEAR

AS OF DD MMM YY — DEIS II BUILDING TRANSACTION PROOF LISTING — PAGE XXXX

19XX

DATA AS SUBMITTED DODAAC	CLASS	SIZE	AGE	ERROR MESSAGE
XXXXXX	XXXXX	XXXXX	19XX	
A96478	71456	12845	1981	NON NUMERIC VALUE INVALID

Conversion Factors for converting products submitted in various units to a standardized Btu value. Maintenance of these tables will be coordinated by the DEIS system operator. The actual update of these tables will be performed by AFDSC.

5.4.6.1 Purpose

This function will provide for maintenance of data tables used for translating codes and converting consumption values. The codes ensure that when summaries by Major Command, Region/CINC, State, or Service are required, the appropriate accumulations can be performed. Maintenance of distribution lists for each of the DEIS II reports will help ensure that all persons receive their reports promptly. The Conversion Factors will help ensure accurate conversion of the data collected.

5.4.6.2 Data Definition

The data items maintained by this function are listed in Table 5-7. These data items will be input on-line. The current DEIS II Header File is of the same format as the DEIS I Header File described in 4.4.5.2. The Header File tape layout is identical to that shown in Table 4-6. A more detailed description of each data item is shown in Appendix B.

5.4.6.3 Processing Logic

Queries, translations, and updates to the part of the DEIS II data base containing coded information are supported through AFDSC.

Table 5-7 contains the edit criteria for adding new data or validating changes to existing data. A DoDAAC is never deleted from the file, but it may be marked INACTIVE when an installation/facility is closed. To inactivate coded information about an installation, the DoDAAC must match one on the file. Table 4-8 contains the translations for Region Codes and State/Country Codes. Table 4-9 contains the translations for Service/Agency Codes. Product Code translations are in Table 5-8. Distribution list codes are in Table 5-9.

Actual update of the data base need not be completed on-line. However, there may be occasions when corrected codes are needed before reports are run and timely report generation is a requirement. Figure 5-11 shows the major processing steps of this function.

5.4.6.4 Outputs

Outputs from this function are updated coded information tables. In addition, on request, a copy of any category of coded information (data elements in Table 5-7) may be requested. At the user's option, the output from this request may be printed/displayed at the user's terminal or directed to a printer at AFDSC for mailing to the user. Listings by Installation Name will be arranged in alphabetical sequence by name and will contain the following fields:

Installation Name
Major Command
DoDAAC

TABLE 5-7

CODED DATA BASE ITEMS

Data Element Number	Data Element Description	EDIT Criteria/Comments
12	DoDAAC	Cannot be blank or zero. Must match a DoDAAC in the file.
13	DODC	DoDAAC delete code, D or blank
26	Region Code	Cannot contain blanks or be zero. Must match a code in Table 4-7. Two characters long.
33	State/Country Code	Cannot contain blanks or be zero. Must match a code in Table 4-7. Two characters long.
16	Installation Name	Cannot contain only blanks.
19	Major Command	Cannot contain only blanks.
30	Service/Agency Code	Must be A, B, F, H, N, M, D, S, or T.
24	Product Code	Cannot contain blanks or zeros. Must match a code in Table 5-8. Three characters long.
6	Conversion Factors	Numeric, positive. Table 5-4 contains the valid values.
11	Distribution Code	Cannot contain blanks or zeros. Table 5-9 contains the valid codes and their translations.

TABLE 5-8

UTILITY PRODUCT IDENTIFICATION CODES

Product	Product Code
Electricity	ELC
Natural Gas	NAG
Coal (Bituminous)	COL
Coal (Anthracite)	ANC
Purchased Steam/ Hot Water	SHW
Fuel Oil	FSX
Photovoltaic	PHO
Solar Thermal	SOL
Wind Power	WND
Wood	WUD
Geothermal	GEO
Cogeneration	COG
Refuse-Derived Fuels	RDF
Hydroelectric	HYD
Fuel Cells	FCL

TABLE 5-9

DEIS II REPORT DISTRIBUTION CODES

Code	Report Name	Report Recipients
	Monthly	
2M01	Region and State Summary	(a)
2M02	Energy Consumption Report	OASD(MRA&L)
2M03	Air Force Utilities	OASD(MRA&L), Air Force
2M04	Navy Utilities	OASD(MRA&L), Navy
2M05	Marine Corps Utilities	OASD(MRA&L), Marine Corps
2M06	Army Utilities	OASD(MRA&L), Army
2M07	DLA Utilities	OASD(MRA&L), DLA
2M08	Utilities Report by DOE Region/CINC	(a)
2M09	Activities Not Reporting	OASD(MRA&L), DFSC
2M10	Activities Not Reporting by Product	OASD(MRA&L), DFSC

(a) DFSC, Naval War Research Center/Stanford Research Institute (NWRC), OJCS, Atlantic Command, Panama Canal (Navy), USEUCOM, DALO-TSE-A, AFLGY/F, OASD(MRA&L), USAGMPA.

TABLE 5-9

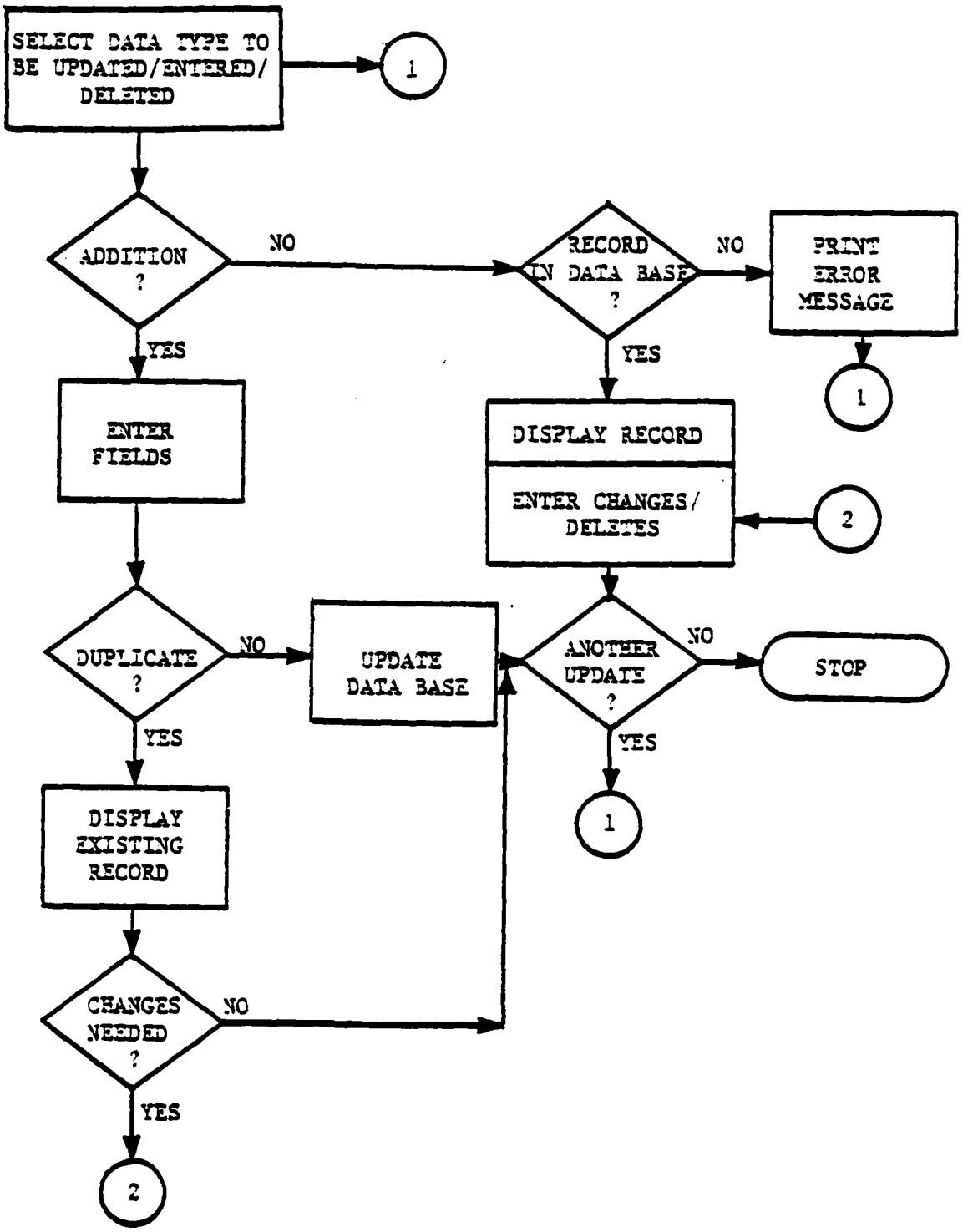
DEIS II REPORT DISTRIBUTION CODES (Continued)

Code	Report Name	Report Recipients
	Quarterly	
2Q01	Region and State Summary	(b)
2Q02	Energy Consumption Report	OASD(MRA&L)
2Q03	Air Force Utilities	OASD(MRA&L), Air Force
2Q04	Navy Utilities	OASD(MRA&L), Navy
2Q05	Marine Corps Utilities	OASD(MRA&L), Marine Corps
2Q06	Army Utilities	OASD(MRA&L), Army
2Q07	DLA Utilities	OASD(MRA&L), DLA
2Q08	Conservation Performance Report	(b)

(b) DFSC-CB, OASD(MRA&L), AFLGY/F, AFBCC, AFCOS/LRGX, DA(DCS/L), USAGMPA, CINCPAC, CNET, CINCLANT, CINCEUR, CNO OP-41, NWRC, USMC(HQ)

FIGURE 5-11

MAINTAIN DEIS II DATA



Service/Agency Code
Region Code
State/Country Code

Listings by DoDAAC will be in alphabetical sequence by DoDAAC and will contain the same six fields listed above, the DoDAAC being printed first on the line rather than Installation Name. For both of these reports, one line will be skipped when the first letter in the name/DoDAAC changes.

Listings of the other codes will be in the order specified on Tables 4-8, 4-9, 5-4, 5-8, and 5-9. For all the reports, page breaks are required only when the page limit is reached.

5.4.7 Perform On-Line Data Entry of Corrections

This function is performed only through the system operator (DFSC-CB). The system operator will have both a hard copy listing of the records in error with error messages (Transaction Proof Listing) and access to the Rejection File. The Rejection File and the listing will be in the same sequence. All errors or questionable data from the edit and convert data and data base update functions will be on one Rejection File. Corrections may be made by up to four people simultaneously or to different segments of the Rejection File. Response to the entering of data on the Correction File should be 1 to 3 seconds under normal circumstances.

Records which are changed (or marked as changed) during the correction process will contain an "E" in column 79 of each record believed to be in error. All records will undergo subsequent re-editing, and those card images containing an "E" in column 79 will update the data base even if the data fail the edits specified in 5.4.4. Records can also be completely deleted or added through this function.

5.4.7.1 Purpose

This function provides an easy-to-use, fast method to correct errors or add records and submit the corrected data for further processing.

5.4.7.2 Data Definition

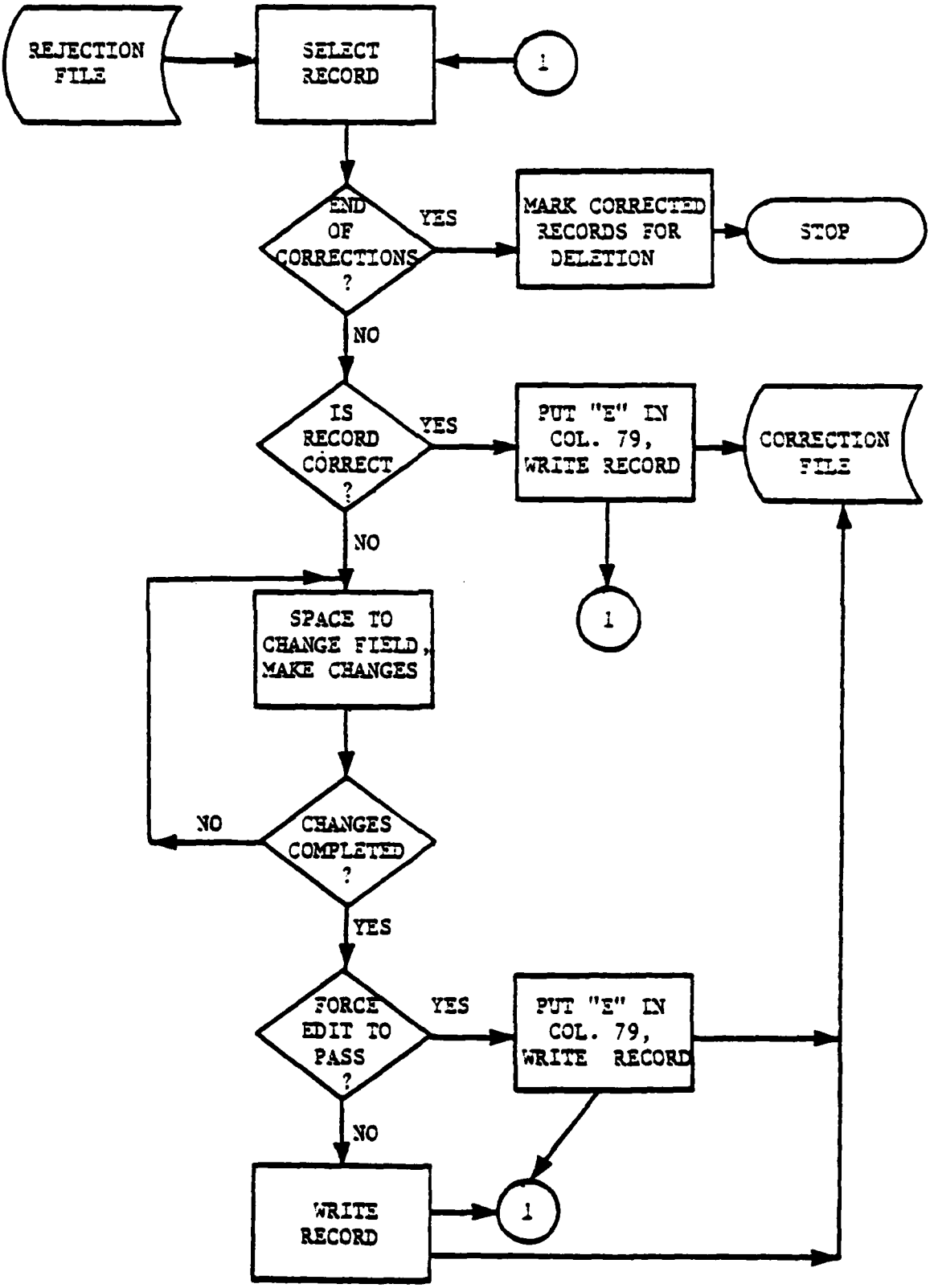
The data items input to this function are corrections to the MEB card images described in Table 5-3 and in Appendix B.

5.4.7.3 Processing Logic

All records in error will be on the Rejection File in the original (as submitted) units. Each record will be displayed for the system operator to correct, to mark as correct with an "E," or to leave unmarked so that further editing may again reject the record. All corrected records from the Rejection File will be placed on the Correction File. The data on the Rejection File are then deleted so that unchanged and subsequent editing errors will be the only data on the Rejection File. Figure 5-12 gives the major processing steps of this function.

FIGURE 5-12

DEIS II ON-LINE CORRECTIONS



5.4.7.4 Output

The output of this function is a Correction File containing MEB records for input to the edit and convert data function. The data on this file are the same as those described in 5.4.7.2.

5.4.8 Archive Data Base

After the time-sensitive processing of DEIS II data is complete, data base maintenance in the form of archiving will be performed. This archiving entails creating quarterly summaries for data older than 13 months and deleting detail no longer needed on-line from the data base. Figure 5-13 shows a schema of the data base before and after archival.

5.4.8.1 Purpose

The archival process provides a method for keeping all needed DEIS II data on-line without overloading the data base to the point where processing time and data storage requirements are excessive. Monthly detail data are needed for the baseline (1975) and for the most recent 13-month period. Quarterly summary data are needed for the 5 years prior to the most recent 13-month period. After monthly data has been archived, only the quarterly (on-line) data will be updated. The Service/agency is responsible for keeping a record of all of these individual monthly transactions in the event that they wish to update and receive new monthly reports from the archived data.

Data deleted from the on-line data base will be kept off-line in a format that allows easy creation of a data base for the specified time period. In addition, this function will supplement AFDSC procedures to back up the on-line data base.

5.4.8.2 Data Definition

Data items used in this function include the Reporting Date (for selection purposes) and all data items in the data base. The data are transferred to off-line storage and deleted from on-line storage. First, however, new quarterly totals may be calculated for a given DoDAAC and Product Code. The data items are described in Appendix B.

5.4.8.3 Processing Logic

If the data to be placed in archival storage are for a month at the beginning of a quarter, quarterly data for that quarter will be developed by adding all fields except identification fields. The identification fields are the Command, Service, Region, State, and Product fields for each DoDAAC. The Reporting Date (month) field will be changed to reflect Q1, Q2, Q3, or Q4 of the fiscal year. The monthly data items for that DoDAAC can then be written to the archival file and deleted from the on-line data base. If the data to be placed in archival storage are not for the first month of a quarter or if the quarterly data are to be taken off-line, the data will simply be copied to archival storage and deleted from the on-line data base. Five years of quarterly data will be maintained in the on-line data base and the quarterly data will also be archived.

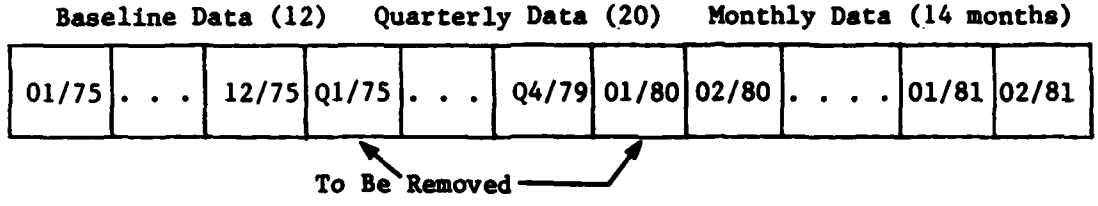
FIGURE 5-13

SCHEMA OF DB BEFORE AND

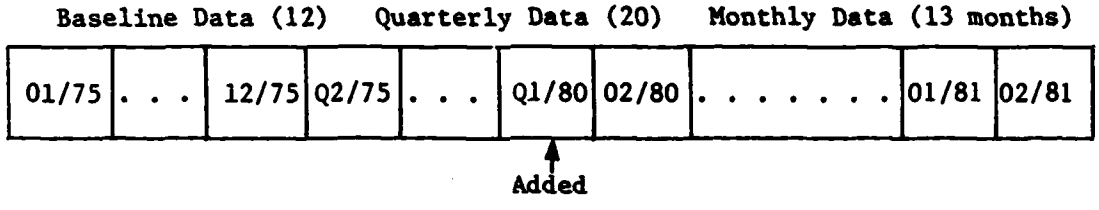
AFTER ARCHIVAL

Case 1--Data to be archived are for a month at the beginning of a quarter--done after update for month 2 of a quarter.

Before

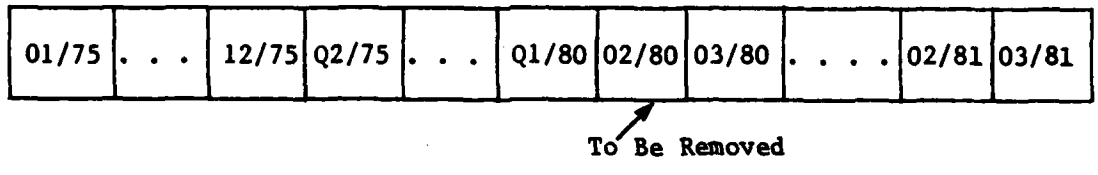


After

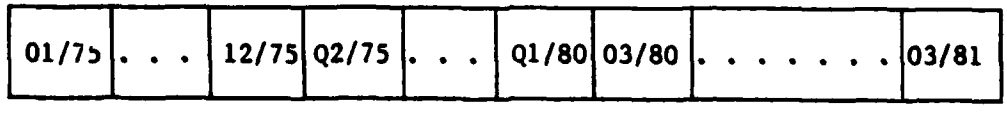


Case 2--Data to be archived are for a month not at the beginning of a quarter--done after update for month 1 or 3 of a quarter.

Before



After



It is expected that INQUIRE facilities will be used for this function so that creating an INQUIRE data base containing those months or quarters of the archival data can be completed with a minimum of trouble. The request procedure for restoring archival data will be contained in the DEIS user's manual. Figure 5-14 shows the major processing steps of this function.

5.4.8.4 Outputs

The output of this function is an updated data base and an INQUIRE format archival file of the records purged.

5.4.9 Produce Preformatted Reports

The function will produce all regular existing DEIS II reports. The reports may be prepared through the host language interface with the DBMS.

5.4.9.1 Purpose

DEIS II preformatted reports include all regularly scheduled reports distributed to DEIS users. As new reports or changes to existing reports are identified, reports that are run regularly for distribution to one or more persons may be specified as preformatted. Ad hoc reports that become regularly scheduled may be reprogrammed, using the host language interface.

5.4.9.2 Data Definition

All fields contained in the data base (see Appendix B) are used in producing the preformatted reports. Except for some code translation and totals of some fields, data from the data base are printed on the reports unchanged.

5.4.9.3 Processing Logic

The processing logic for each report is explained in the following paragraphs. A list of all the Product Codes and their translations will be provided on a separate page at the beginning of each set of reports. Figure 5-15 shows a sample of this header page.

5.4.9.3.1 Monthly/Quarterly Region and State Summary

The DEIS II Monthly/Quarterly Region and State Summaries are reports of product/consumption data for the specified month or quarter. These reports require reference to the DEIS II data base, coded information, and some calculations.

Figure 5-16 shows the layout for the monthly report. The quarterly report is the same except that the data are for the quarter specified in the title. There are subtotals for each product for each DoDAAC for the quarter.

There is a subtotal for each region as well as a grand total for the report. Regions and states will be printed in the order listed in Table 4-6. The report should have page breaks at each change of region as well as when the page limit is reached.

FIGURE 5-14

ARCHIVE DEIS II DATA BASE

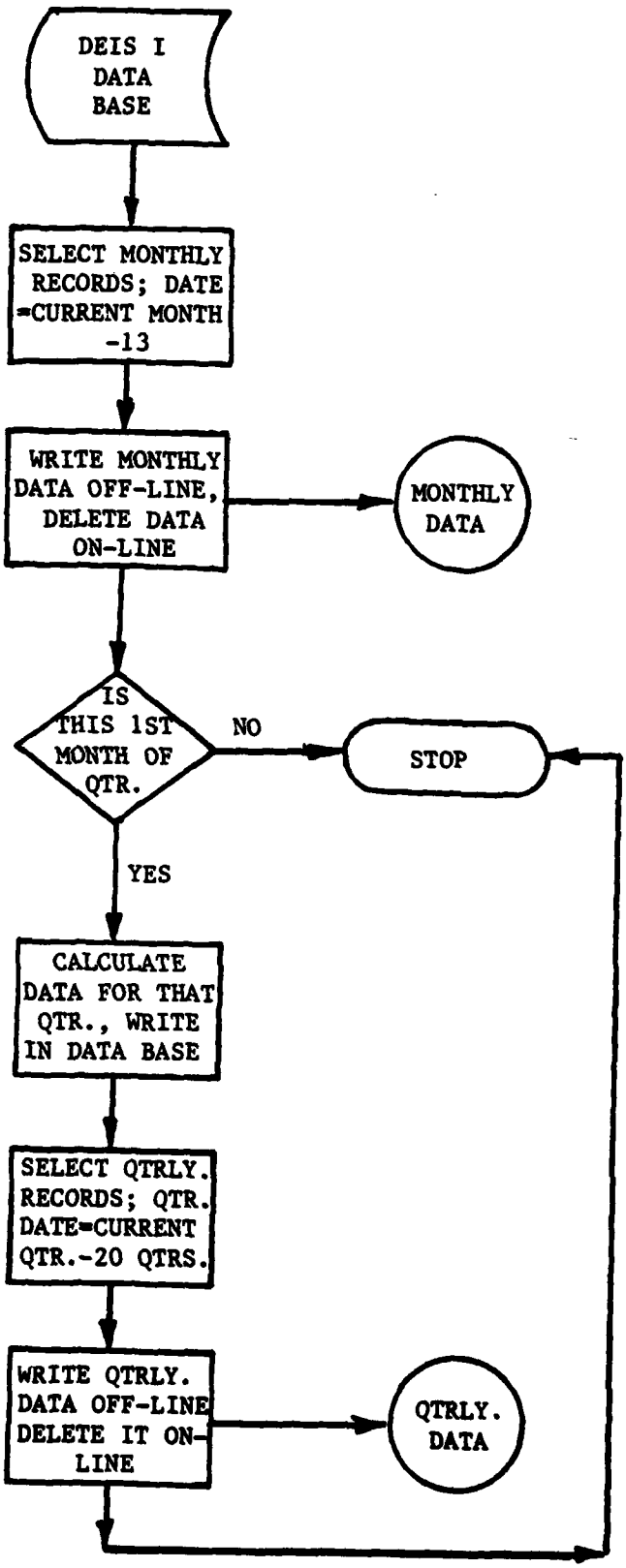


FIGURE 5-15

DEIS II REPORT HEADER SHEET

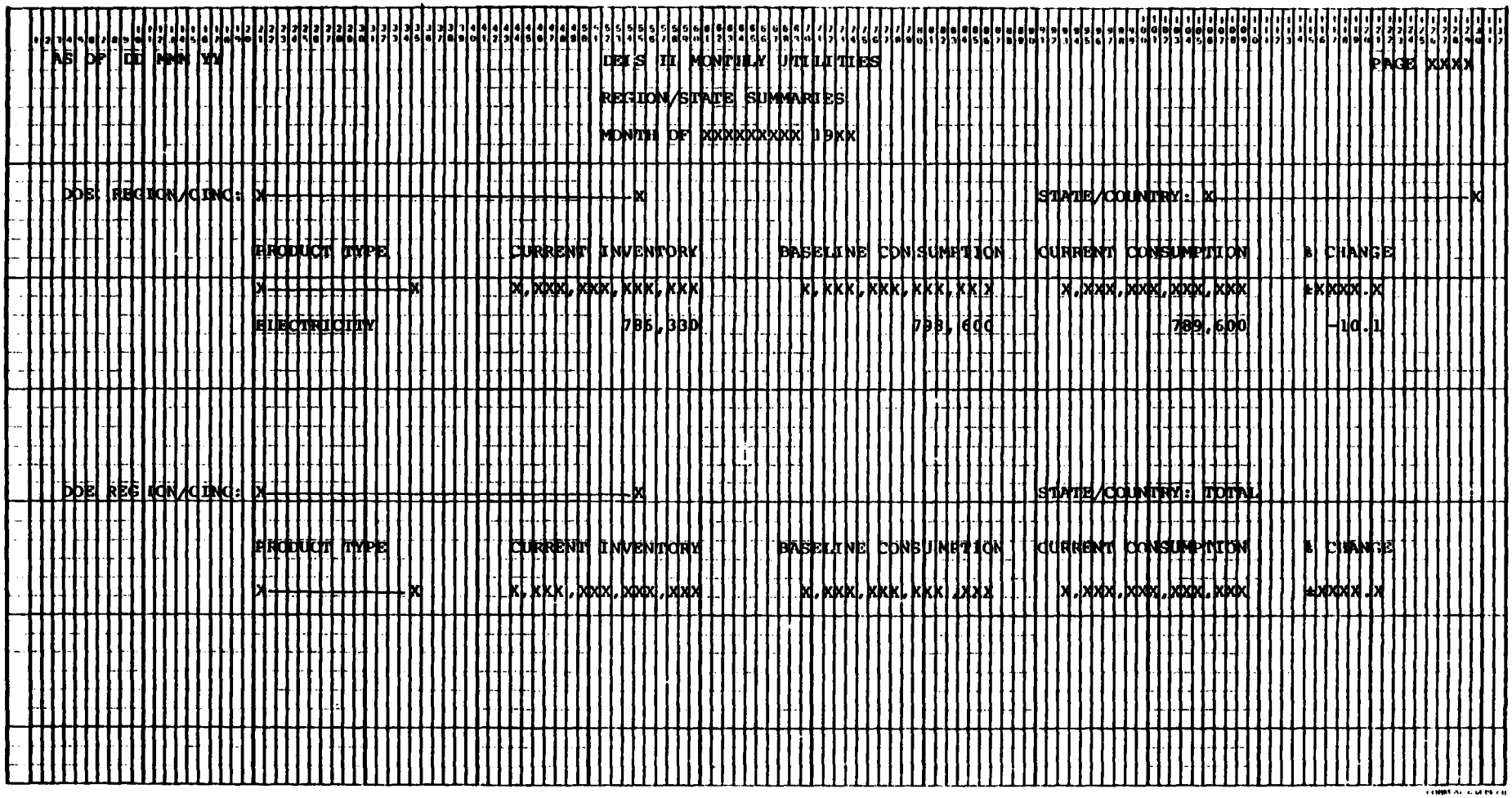
AS OF DD MMM YR

DEIS II CODE TRANSLATIONS

PRODUCT CODE	PRODUCT	PRODUCT CODE	PRODUCE
ANC	ANTHRACITE COAL	NAG	NATURAL GAS
COL	BITUMINOUS COAL	PHO	PHOTOVOLTAIC
ELC	ELECTRICITY	PPG	PROPANE/LPG/BUTANE
FCL	FUEL CELLS	RDF	REFUSE DERIVED FUELS
FSX	FUEL OIL, INCLUDES DFL,DF2 FS1,FS2,FS4, FS5,FSG,FSL,KSD NSF,KSN	SHW	STEAM/HOT WATER (PURCHASED)
		SOL	SOLAR THERMAL
GEO	GEO THERMAL	WCF	WOOD CHIPS/LOGS
HYD	HYDROELECTRIC	WND	WIND
SLP	OFF SPECIFICATION FUEL	WUD	WOOD

FIGURE 5-16

DEIS II UTILITIES BY REGION/STATE



5.4.9.3.2 Monthly/Quarterly/Cumulative Utilities by DOE Region/CINC

The DEIS II Monthly Utilities by DOE Region/CINC summary reports product consumption data, including the amount of product used in the units originally reported. Because the data base stores only Btu, the Btu Conversion Factor must be used to convert data to the original units for the report.

Figure 5-17 shows the layout for this report. Regions will be printed in the order listed in Table 4-8, and fields will contain the subtotals for that region. The sum of all the subtotals must equal the sum of all the detail Current Consumption fields. Page breaks are required at each change of region as well as when the page limit is reached.

The quarterly and cumulative reports provide the same information as the monthly report except that the data are for the quarter or year-to-date, respectively. There are subtotals for each product and DoDAAC for the quarter/year-to-date. The title is changed to DEIS II QUARTERLY UTILITIES BY DOE REGION/CINC, X QUARTER 19XX for the quarterly report, and to DEIS II CUMULATIVE UTILITIES BY DOE REGION/CINC, END OF XXXXXXXXX (Month) 19XX for the cumulative report.

There are subtotals for each Major Command for each product listed after the detail data. The final pages of the report contain totals for each Service.

5.4.9.3.3 Energy Consumption Reports

The monthly/quarterly/year-to-date Energy Consumption Report lists Service consumption data by DoDAAC within Major Command. Each product used by a DoDAAC is reported. Totals of each product are produced for each Service/ Agency and for all DoD. Figure 5-18 shows the layout for this report.

5.4.9.3.4 Conservation Performance Report

The DEIS II Conservation Performance Report is produced quarterly to show the change in consumption over the same period in 1975. Each Service/Agency's total product consumption is shown for both CONUS and overseas. There are also CONUS, overseas, and worldwide summary pages. Figure 5-19 shows the layout of this report. A page break is required for each new Service and for the CONUS, overseas, and worldwide summary pages.

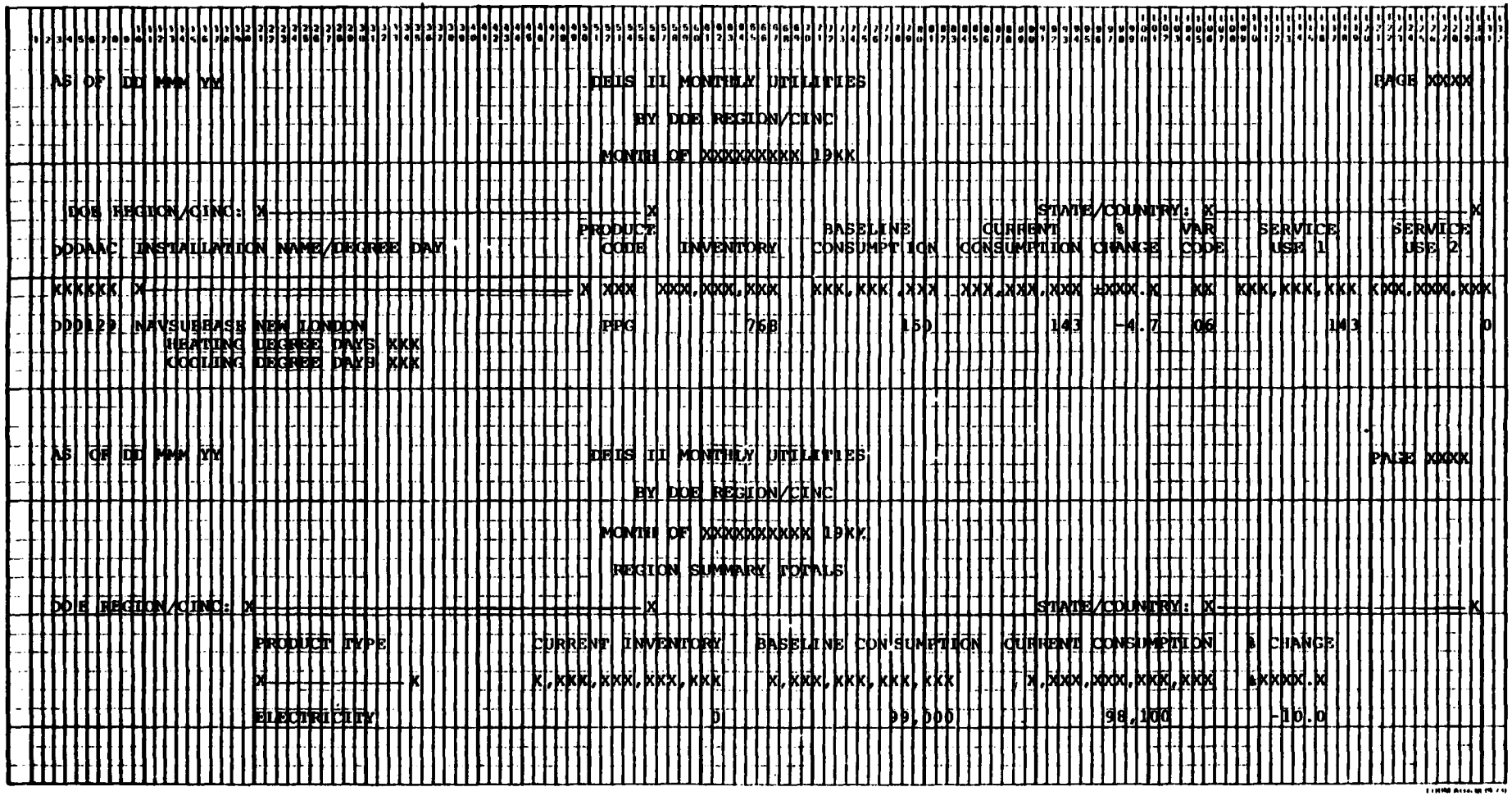
5.4.9.3.5 Buildings Report

The DEIS II Buildings Report is produced annually to show energy consumed and the types of buildings within the DoD. The heating and cooling degree days and personnel days are the total for the fiscal year. Figure 5-20 shows the layout of this report for each Service and for total DoD. A page break is required for each new Service and for the total.

A detail Buildings Report is also produced for verification and conservation management by each installation. Each DoDAAC within a Service will be listed alphabetically. The layout of this report is similar to that in Figure 5-20, except that Service is replaced by DoDAAC and Installation Name.

FIGURE 5-17

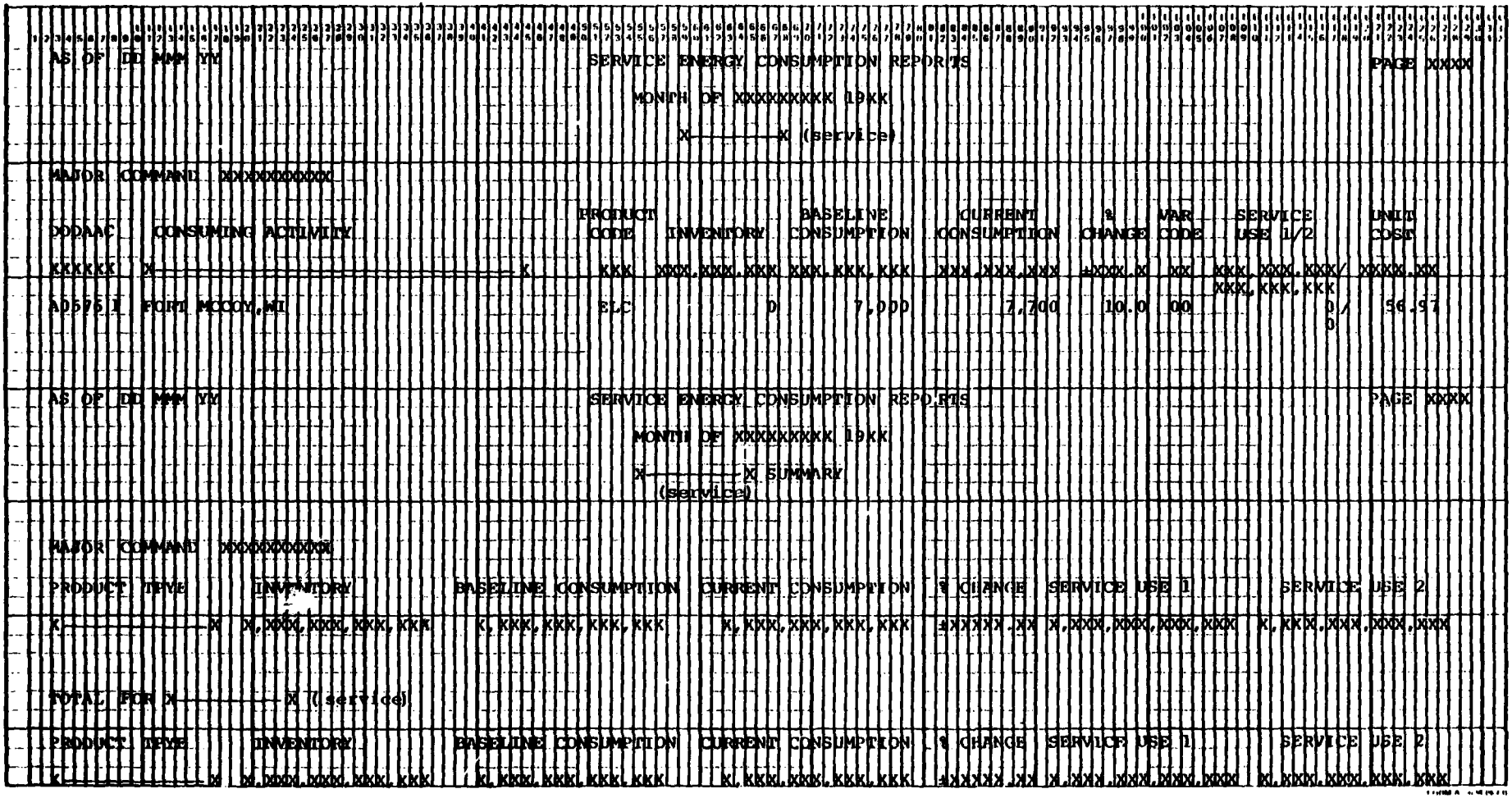
DEIS II UTILITIES BY DOE REGION/CINC



```
AS OF DD MMM YY                    DEIS II MONTHLY UTILITIES                    PAGE XXXXX
                                   BY DOE REGION/CINC
                                   MONTH OF XXXXXXXXX 19XX

DOE REGION/CINC: X                X                    STATE/COUNTRY: X                  X

DODAAC  INSTALLATION NAME/DEGREE DAY   PRODUCT CODE  BASELINE INVENTORY  BASELINE CONSUMPTION  CURRENT CONSUMPTION  % VAR CHANGE  VAR CODE  SERVICE USE 1  SERVICE USE 2
XXXXXX  X                          X  XXX  XXX,XXX,XXX  XXX,XXX,XXX  XXX,XXX,XXX  ±XXX.X  XX  XXX,XXX,XXX  XXX,XXX,XXX
000129  NAVSUBBASE NEW LONDON          FPG  768  150  143  -4.7  06  143  0
        HEATING DEGREE DAYS XXX
        COOLING DEGREE DAYS XXX

AS OF DD MMM YY                    DEIS II MONTHLY UTILITIES                    PAGE XXXXX
                                   BY DOE REGION/CINC
                                   MONTH OF XXXXXXXXX 19XX
                                   REGION SUMMARY TOTALS

DOE REGION/CINC: X                X                    STATE/COUNTRY: X                  X

PRODUCT TYPE  CURRENT INVENTORY  BASELINE CONSUMPTION  CURRENT CONSUMPTION  % CHANGE
X            X  X,XXX,XXX,XXX,XXX  X,XXX,XXX,XXX,XXX  X,XXX,XXX,XXX,XXX  ±XXXX.X
ELECTRICITY  0  99,000  98,100  -10.0
```

FIGURE 5-18

SERVICE ENERGY CONSUMPTION REPORTS



AS OF DD MMM YY SERVICE ENERGY CONSUMPTION REPORTS PAGE XXXX

MONTH OF XXXXXXXXX 19XX

X_____X (service)

MAJOR COMMAND XXXXXXXXXX

DODAAC	CONSUMING ACTIVITY	PRODUCT CODE	INVENTORY	BASELINE CONSUMPTION	CURRENT CONSUMPTION	% CHANGE	MAR CODE	SERVICE USE 1/2	UNIT COST
XXXXXX	X_____X	XXX	XXX,XXX,XXX	XXX,XXX,XXX	XXX,XXX,XXX	±XXXX.X	XX	XXX,XXX,XXX/ XXX,XXX,XXX	XXXXX.XX
A0576 1	FORT MCCOY,WI	ELC	0	7,000	7,700	10.0	00	0/ 0	56.97

AS OF DD MMM YY SERVICE ENERGY CONSUMPTION REPORTS PAGE XXXX

MONTH OF XXXXXXXXX 19XX

X_____X SUMMARY
(service)

MAJOR COMMAND XXXXXXXXXX

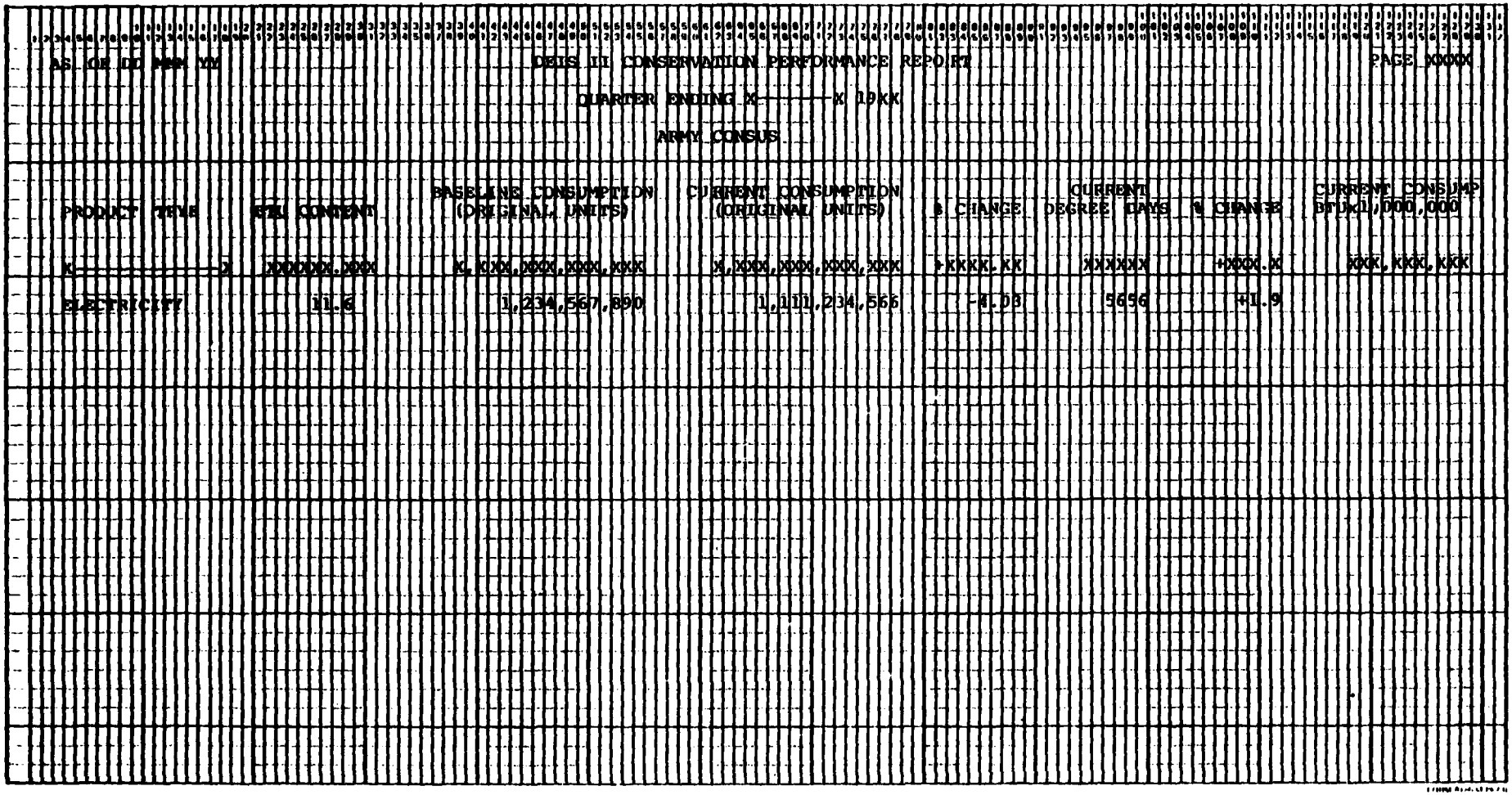
PRODUCT TYPE	INVENTORY	BASELINE CONSUMPTION	CURRENT CONSUMPTION	% CHANGE	SERVICE USE 1	SERVICE USE 2
X_____X	X,XXX,XXX,XXX,XXX	X,XXX,XXX,XXX,XXX	X,XXX,XXX,XXX,XXX	±XXXXX.XX	X,XXX,XXX,XXX,XXX	X,XXX,XXX,XXX,XXX

TOTAL FOR X_____X (service)

PRODUCT TYPE	INVENTORY	BASELINE CONSUMPTION	CURRENT CONSUMPTION	% CHANGE	SERVICE USE 1	SERVICE USE 2
X_____X	X,XXX,XXX,XXX,XXX	X,XXX,XXX,XXX,XXX	X,XXX,XXX,XXX,XXX	±XXXXX.XX	X,XXX,XXX,XXX,XXX	X,XXX,XXX,XXX,XXX

FIGURE 5-19

DEIS II CONSERVATION PERFORMANCE REPORT



AS OF DD MMM YY DEIS II CONSERVATION PERFORMANCE REPORT PAGE XXXX

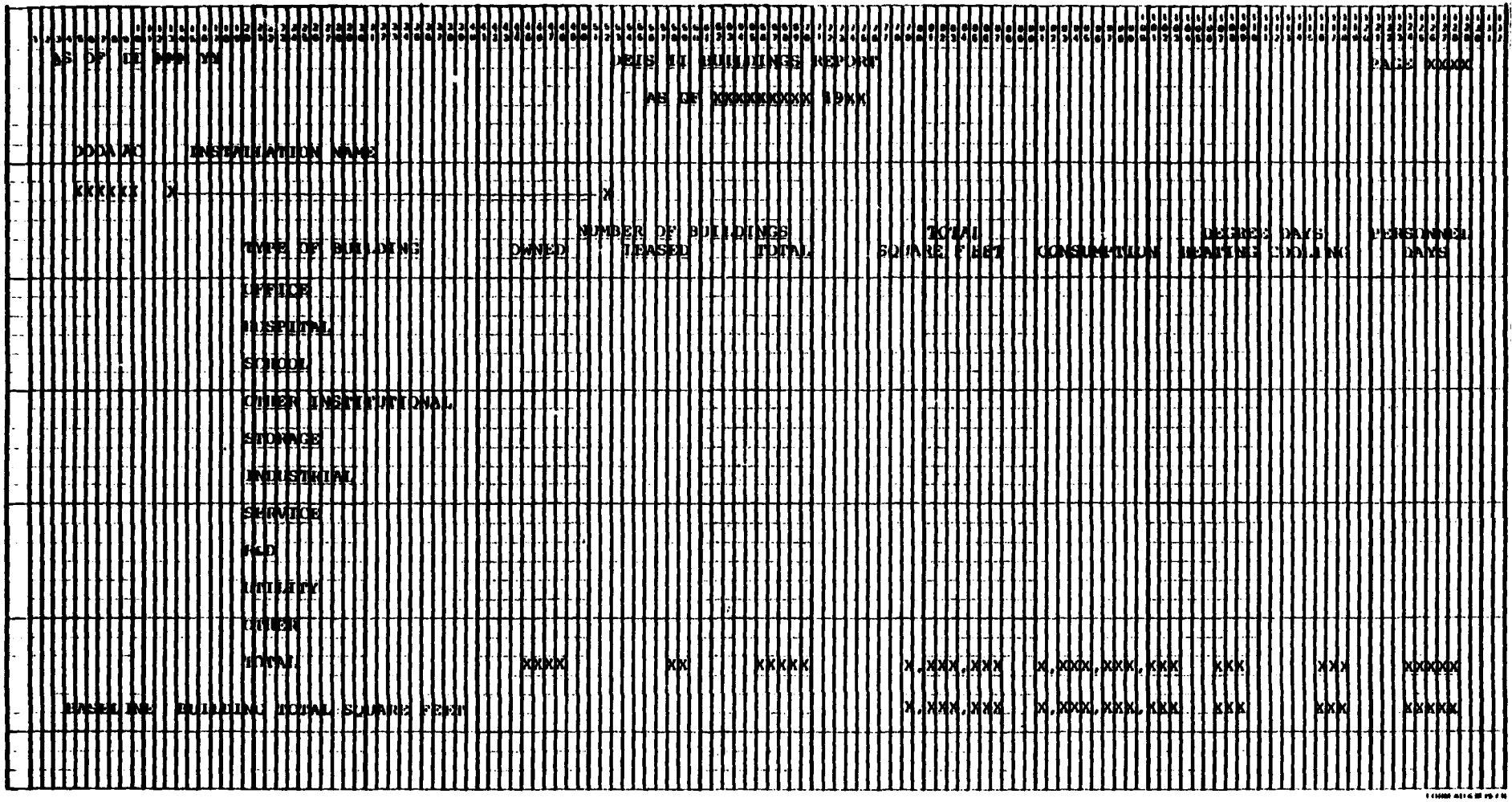
QUARTER ENDING X-------X 19KK

ARMY CONUS

PRODUCT TYPE	BTU CONTENT	BASELINE CONSUMPTION (ORIGINAL UNITS)	CURRENT CONSUMPTION (ORIGINAL UNITS)	% CHANGE	CURRENT DEGREE DAYS	% CHANGE	CURRENT CONSUMP BTUx1,000,000
X----------X	XXXXXX.XXXX	X,XXX,XXX,XXX,XXX	X,XXX,XXX,XXX,XXX	+XXXX.XX	XXXXXX	+XXX.X	XXX,XXX,XXX
ELECTRICITY	11.6	1,234,567,890	1,111,234,566	-4.03	5656	+1.9	

FIGURE 5-20

DEIS II BUILDINGS REPORT



5.4.9.3.6 Type of Energy Used Report

The DEIS II Type of Energy Used Report is produced annually to show the uses of energy on an installation. These data are gathered annually on the MEB 5 data cards and are not stored in the data base. Table 5-10 shows the layout for the MEB 5 cards. There may be up to three MEB 5 cards per DoDAAC. Figure 5-21 shows the layout of this report.

5.4.10 Ad Hoc Reports

This function will provide macros to extract data from the DEIS II data base.

5.4.10.1 Purpose

Queries to the DEIS II data base from users other than the system operator will be of two types. One type of query will be simply to retrieve certain data elements, based on user-specified selection criteria, and display the data. At times, simple arithmetic operations may be requested on the data. For this type of ad hoc report, the macros should assign any files and invoke any processors that may be needed, as well as assist the user to create query statements.

The second type of query will be to extract and store selected data elements for further processing by SPSS or equivalent programs. In particular, linear regression, time series cross tabulation, and one-way analysis of variance statistical procedures may be performed on selected data elements.

5.4.10.2 Data Input

The user should have to provide a minimum of data to produce ad hoc reports. Defaults for table headings should exist. The user should be allowed to direct the output from the session.

The following are samples of the queries that may be requested:

- Display the data for DoDAAC = XXXXXX, Reporting Date = MMYY, and Product Code = XXX.
- What is the total consumption of electricity for quarter X of fiscal year X (including the current fiscal year)? Multiply this number by 11.6 to give total consumption in MBTU.
- What is the total consumption of Product Codes SHW, WUD, SOL for quarter X of the current fiscal year?
- What is the total consumption of each Product Code multiplied by the Btu Content Conversion factor? What is the total of the resulting Btu consumptions?
- What fraction of total consumption (measured in Btu calculated as above) comes from electricity, natural gas, coal, solar?

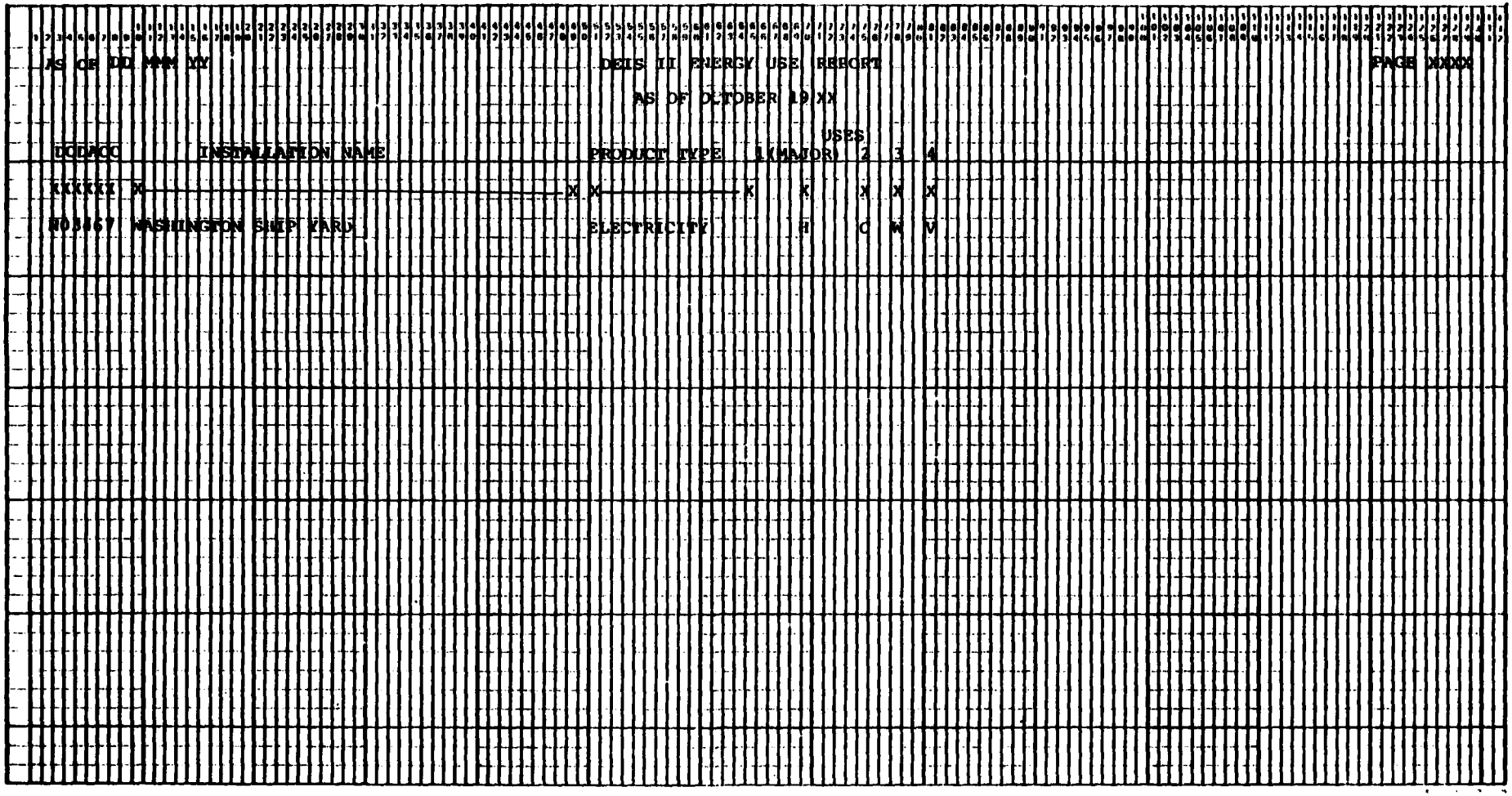
TABLE 5-10

MEB 5 RECORD LAYOUT

Card	Column	Data Item	Value/Comments
All Cards	1-5	Card ID	MEB 5
	6	Blank	
	7-12	DoDAAC	
	13	Blank	
	14-17	Reporting Date	Month, Year
	18-20	Blank	
	21	Card 1,2, or 3	
	22	Blank	
Card 1	23-26	Uses for Electricity	Alphabetic,blank or zero
	27	Blank	
	28-31	Uses for Natural Gas	Alphabetic,blank or zero
	32	Blank	
	33-36	Uses for Fuel Oil	Alphabetic,blank or zero
	37	Blank	
	38-41	Uses for Steam/Hot Water	Alphabetic,blank or zero
	42	Blank	
	43-46	Uses for Anthracite Coal	Alphabetic,blank or zero
	47	Blank	
	48-51	Uses for Bituminous Coal	Alphabetic,blank or zero
	52	Blank	
	53-56	Uses for Propane/LPG	Alphabetic,blank or zero
	57	Blank	
	58-61	Uses for Diesel	Alphabetic,blank or zero
	62-80	Blank	
Card 2	23-26	Uses for Photovoltaic	Alphabetic,blank or zero
	27	Blank	
	28-31	Uses for Solar Thermal	Alphabetic,blank or zero
	32	Blank	
	33-36	Uses for Wind Power	Alphabetic,blank or zero
	37	Blank	
	38-41	Uses for Wood	Alphabetic,blank or zero
	42	Blank	
	43-46	Uses for Off Specification Fuel	Alphabetic,blank or zero
	47	Blank	
	48-51	Uses for Geothermal	Alphabetic,blank or zero
	52	Blank	
	53-56	Uses for Cogeneration	Alphabetic,blank or zero
	57	Blank	
	58-61	Uses for Refuse-Derived Fuels	Alphabetic,blank or zero
	62-80	Blank	
Card 3	23-26	Uses for Reclaimed Bilge/Lub Oil	Alphabetic,blank or zero
	27	Blank	
	28-31	Uses for Hydroelectric	Alphabetic,blank or zero
	32	Blank	
	33-36	Uses for Fuel Cells	Alphabetic,blank or zero
	37-80	Blank	

FIGURE 5-21

DEIS II ENERGY USE REPORT



- Compare the current year's total consumption divided by total square footage to 1975 total consumption divided by total square footage. What is ratio of square footage of old buildings to that of new buildings?

- Compare the current month's total consumption divided by degree days to the total consumption divided by degree days for this month last year. What is the percentage change?

5.4.10.3 Output

Output will be printed on the originating terminal, directed to another (high-speed) printer, or saved in a file for further processing. In addition, at the user's option, the statements used to generate the query may be saved for future use and modification.

APPENDIX A

DEIS I DATA DICTIONARY

This description of the DEIS I data items is separated into two categories, static data and dynamic data. Static data are defined as those data which are used mainly for reference during an operation and are usually generated or updated in timeframes independent of normal runs. In the DEIS-80 environment, this consists of the coded information portion of the data base.

Dynamic data include all data which are intended to be added, changed, or deleted by a normal run or during on-line operations. For DEIS I, this is the installation/activity data about petroleum products.

Within each category, the elements are listed in alphabetical order. The format type, length (no characters), source, number of occurrences, frequency of update or submission, definition, and edit criteria are given for each data element. The dynamic data are shown in Table A-1. The static data are shown in Table A-2.

TABLE A-1

DEIS I DYNAMIC DATA

Data Element Number	Element Name	Format Type	Format Length	Source	Required	Number of Occurrences	Frequency of Update/ Submission	Edit Criteria	Description/Alias
1	AVIATION	N	6	MEA 3 cc 51-56	No	1 per Product Code, per DoDAAC	Monthly	Numeric,* positive or blank**	Credit Cards, Form 15/44, into Plane
2	AVG DAY	N	7	Calculated	Yes	1 per Product Code, per DoDAAC	Monthly	Numeric, 1 decimal place	Average Daily Consumption
NA	CARDNO	N	1	MEA cc 5	Yes	1 per Card	NA	2, 3, or 4	Not kept in DB
NA	CARDTY	A	3	MEA cc 1-3	Yes	1 per Card	NA	MEA	Not Kept in DB
3	CLOSINV	N	7	MEA 2 cc 55-61	Yes	1 per Product Code, per DoDAAC	Monthly	Numeric, positive	Closing Inventory
4	COMMER	N	7	MEA 2 cc 39-45	No	1 per Product Code, per DoDAAC	Monthly	Numeric, positive	Commercial Receipts
5	CONSUM	N	7	Calculated, Sum of elements numbers	Yes	1 per Product Code, per DoDAAC	Monthly	Numeric, positive	Total Consumption
6	CORRECT	N	1	Generated	No	1 per Product Code, per DoDAAC	As Needed		Correction Code
7	DATEUP	N	6	System Date	No	1 per Product Code, per DoDAAC	As Needed	Month, Day, Year	Date of Update
9	DoDAAC	AN	6	MEA cc 7-12	Yes	1 per Card, up to 1400 unique codes	Monthly	Valid code on file	DoD Activity Address Code, UIC, Base/ Facility ID
11	DoDRCPT	N	7	MEA 2 cc 47-53	No	1 per Product Code, per DoDAAC	Monthly	Numeric, positive or blank	Receipts from DoD
12	INTERTRAN	N	6	MEA 4 53-57		1 per Product Code, per DoDAAC	Monthly	Numeric, positive or blank	Inter-Service Transfers
13	INTRATRAN	N	6	MEA 4 cc 47-51	No	1 per Product Code	Monthly	Numeric, positive	Intra-Service Transfers

* All numeric (N) fields are integer values unless a decimal value is specified.

** Numeric fields that are blank on input are registered as zero in the data base.

TABLE A-1 (continued)

DEIS I DYNAMIC DATA

Data Element Number	Element Name	Format Type	Format Length	Source	Required	Number of Occurrences	Frequency of Update/ Submission	Edit Criteria	Description/Alias
15	ISSUES	N	7	MEA 2 cc 31-37	Yes	1 per Product Code, per DoDAAC	Monthly	Numeric, positive	All fuel issued
16	LOSSD	N	6	MEA 3 cc 44-49	No	1 per Product Code, per DoDAAC	Monthly	Numeric, positive or blank	Amount downgraded or lost
18	NONDOD	N	5	MEA 4 cc 41-45	No	1 per Product Code, per DoDAAC	Monthly	Numeric, positive	All issues to non-DoD
19	OPENINV	N	7	MEA 2 cc 23-29	Yes	1 per Product Code, per DoDAAC	Monthly	Numeric, positive equal to CLOSINV of previous month	Opening Inventory
21	PRODCODE	AN	3	MEA cc 19-21	Yes	Up to 43 per DoDAAC	Monthly	Valid code on file	Product Code
22	PRIMARY	N	6	MEA 3 cc 23-28	Yes	1 per Product Code, per DoDAAC	Monthly	Numeric, positive	Primary Use
23	QUAN1	N	5	MEA 4 cc 23-27	No	1 per Product Code, per DoDAAC	Monthly	Numeric, positive or blank (0)	Quantity Issued to "a," Sold To
24	QUAN2	N	5	MEA 4 cc 29-33	No	1 per Product Code, per DoDAAC	Monthly	Numeric, positive or blank (0)	Quantity Issued to "b," Sold To
25	QUAN3	N	5	MEA 4 cc 35-39	No	1 per Product Code, per DoDAAC	Monthly	Numeric, positive or blank (0)	Quantity Issued to "c," Sold To
29	RPTDATE	AN	4	MEA cc 14-17	Yes	1 per card	Monthly	Month (01 to 12) and Year > 75 and ≤ current year or quarter (Q1, Q2, Q3, Q4) and year	Reporting date, AS OF or Quarter for Summary data

TABLE A-1 (continued)

DEIS I DYNAMIC DATA

Data Element Number	Element Name	Format Type	Format Length	Source	Required	Number of Occurrences	Frequency of Update/ Submission	Edit Criteria	Description/Alias
30	SECOND	N	6	MEA 3 cc 30-35	No	1 per Product Code, per DoDAAC	Monthly	Numeric or blank	Secondary Use
33	SERVICE3	N	6	MEA 3 cc 58-63	No	1 per Product Code, per DoDAAC	Monthly	Numeric, positive or blank	Service Use MEA 3
34	SERVICE4	N	5	MEA 4 cc 59-63	No	1 per Product Code, per DoDAAC	Monthly	Numeric, positive or blank	Service Use MEA 4
38	TAC	N	1	MEA 2 cc 13	No	1 per card	Monthly	Blank or 9	DFSC Facility
39	THIRD	N	6	MEA 3 cc 37-42	No	1 per Product Code, per DoDAAC	Monthly	Numeric or blank	Tertiary Use

TABLE A-2

DEIS I STATIC DATA

Data Element Number	Element Name	Format Type	Format Length	Source	Required	Number of Occurrences	Frequency of Update/ Submission	Edit Criteria	Description/Alias
8	DISTRIB	AN	4	DBA	Yes	25	As Needed		Distribution Code
9	DoDAAC	AN	6	DoD 4000.25D	Yes, if it consumes energy	1400	As Needed		DoD Activity Address Code UIC, Base/Facility ID
10	DoDC	A	1	DBA	No	1 per DoDAAC	As Needed	Blank or D	DoDAAC delete code
14	INSTALL	AN	50	Services	Yes	1 per DoDAAC	As Needed		Installation Name
17	MAJCOM	AN	10	Services	Yes	1 per DoDAAC	As Needed		Major Command
20	PROD	A		DoD 4140.25M	Yes	43	As Needed		Products
21	PRODCODE	AN	3	DoD 4140.25M	Yes	43	As Needed	Valid Code	Product Codes
27	RECIPIENT	AN	150	DBA	Yes	40	As Needed		Address of Recipients of Reports
27	REGION	AN	28	Table 4-6	Yes	18	As Needed		Region/CINC Name
28	REGIONC	AN	2	Table 4-6	Yes	18	As Needed	Valid Code	Region/CINC Code
31	SERVICE	A	20	Table 4-7	Yes	9	As Needed		Service/Agency Name
32	SERVICEC	A	1	Table 4-7	Yes	9	As Needed	Valid Code	Service/Agency Code
35	SHIPDTE	N	4	DBA	No	<106	As Needed	9 or Blank	Date ship is to be returned to service
36	STATE	A	28	Table 4-6	Yes	120	As Needed		State/Country
37	STATEC	AN	2	Table 4-6	Yes	120	As Needed	Valid Code	State/Country Code
38	TAC	N	1	DBA	No	<100	As Needed	9 or Blank	DFSC facility

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APPENDIX B

DEIS II DATA DICTIONARY

This description of the DEIS II data items is separated into two categories, static data and dynamic data. Static data are defined as those data which are used mainly for reference during an operation and are usually generated or updated in timeframes independent of normal runs. This includes square footage data since these data are entered annually. Also included as static data is the coded information portion of the data base.

Dynamic data include all data which are intended to be added, changed, or deleted by a normal run or during on-line operations. For DEIS II, this is the installation/activity data about utility energy consumption and the data supplied by the National Weather Service on degree days.

Within each category of data, the elements are listed in alphabetical order. The format type, length (in characters), source, number of occurrences, frequency of updates or submission, edit criteria and definition are given for each data element. The dynamic data are shown in Table B-1, the static data are shown in Table B-2.

TABLE B-1

DEIS II DYNAMIC DATA

Data Element Number	Element Name	Format Type	Format Length	Source	Required	Number of Occurrences	Frequency of Update/ Submission	Edit Criteria	Description/Alias
5	BUTCON	N*	6	MEB 2 cc 34-39	No	1 per Product Code, per DoDAAC	As Needed	Within 10% of Std. value	Btu Content of Fuel, contains decimal point, as appropriate
NA	CARDNO	N	1	MEB cc 5	Yes	1 per Card	NA	2 or 3	Not kept in DB
NA	CARDTY	A	3	MEB cc 1-3	Yes	1 per Card	NA	MEB	Not kept in DB
7	CDDAY	N	4	MEB 3 cc 37-40 or Nat'l. Weather Service (NWS)	Yes	1 per DoDAAC	Monthly	Numeric, if from MEB 3 within 10% of value from NWS	Cooling Degree Days
8	CONSUM	N	8	MEB 2 cc 41-48	Yes	1 per Product Code, per DoDAAC	Monthly	Numeric, positive, within 10% of value this month last year	Consumption, Current Consumption
9	CORRECT	N	1	Generated	No	1 per Product Code, per DoDAAC	As Needed		Correction Code
10	DATEUP	N	6	System Date	No	1 per Product Code per DoDAAC	As Needed	Month, day, year	Date of Update
12	DoDAAC	AN	6	MEB cc 12-17	Yes	1 per Card, up to 1200 unique codes	Monthly	Valid code on file	DoD Activity Address Code, Base/Facility ID, UIC
14	FUNDED	N	8	MEB 2 cc 53-60	Yes	1 per Product Code per DoDAAC	Monthly	Numeric, positive, $\leq$ CONSUM	Service Funded Consumption
15	HDDAY	N	4	MEB 3 cc 42-45 or NWS	Yes	1 per DoDAAC	Monthly	Numeric, if from MEB 3, within 10% of value from NWS	Heating Degree Days

* All numeric (N) fields are integer values unless a decimal value is specified.

** Numeric fields that are blank on input are registered as zero in the data base.

TABLE B-1 (continued)

DEIS II DYNAMIC DATA

Data Element Number	Element Name	Format Type	Format Length	Source	Required	Number of Occurrences	Frequency of Update/ Submission	Edit Criteria	Description/Alias
17	INV	N	8	MEB 2 cc 23-30	No, except for Fuel Oil, Coal Propane/LPG/ Butane, Wood	1 per applicable Product Code per DoDAAC	Monthly	Numeric, positive, within 10% of value this month last year	Inventory
21	PERSt	N	6	MEB 3 cc 30-35	No	1 per DoDAAC	Monthly	Numeric, positive or blank	Number of Personnel Days in Industrial Processes
22	PERSQ	N	6	MEB 3 cc 23-28	No	1 per DoDAAC	Monthly	Numeric, positive or blank	Number of Personnel Days in Quarters
24	PRODCODE	AN	3	MEB cc 19-21	Yes	Up to 30 per DoDAAC	Monthly	Valid code on file	Product Code
28	RPTDATE	N	4	MEB cc 7-10	Yes	1 per Card	Monthly	Month (01 to 12) and Year > 75 and ≤ current year	Reporting Date, AS OF Date
34	UCOM	N	8	MEB 2 cc 62-69	No	1 per Product Code per DoDAAC		Numeric, positive or blank	For use by component
35	VAR	N	2	MEB 2 cc 50-51	No	1 per Product Code per DoDAAC	Monthly	Numeric or blank, if numeric, must be valid code for this Service	Variance Code
16	WEIGHT	N	8	MEB 3 cc 47-54	For RDF only	1 per DoDAAC	Monthly		Weight of Refuse Used

TABLE B-2

DEIS II STATIC DATA

Data Element Number	Element Name	Format Type	Format Length	Source	Required	Number of Occurrences	Frequency of Update/ Submission	Edit Criteria	Description/Alias
1	BCLASS	AN	3	Generated	Yes	12	As Needed		Class of Building
2	BLEASE	N	6	Services	Yes	1 per BSIZE, per BCLASS	Annually	Within 10% of value in previous year	Number of Buildings Leased on the Installation
3	BOWN	N	6	Services	Yes	1 per BSIZE, per BCLASS	Annually	Within 10% of value in previous year	Number of Buildings Owned on the Installation
4	BSIZE	AN	2	Computed		3 per BCLASS	Annually	SM, MD, LG	Building Size Category
6	BTUCOV	N	6	DBA	Yes	30	As Needed		Standard Btu Conversion Factor for Each Product
11	DISTRIB	AN	4	DBA	Yes	25	As Needed		Distribution Code
12	DODACC	AN	6	DoD 4000.25D	Yes	1200	As Needed		DoD Activity Address Code, Base/Facility ID, UIC
13	DoDC	AN	1	DBA	No	1 per DoDAAC	As Needed	Blank or D, usually blank	DoDAAC delete code
16	INSTAL	AN	50	Services	Yes	1 per DoDAAC	As Needed		Installation Name
18	MAJCOM	AN	10	Services	Yes	1 per DoDAAC	As Needed		Major Command
19	NEWB	N	6	Services	Yes	1 per BSIZE, per BCLASS	Annually		New Buildings--In Use after 1975
20	OLDB	N	6	Services	Yes	1 per BSIZE, per BCLASS	Annually	Same	Buildings In Use prior to 1975

TABLE B-2 (continued)

DEIS II STATIC DATA

Data Element Number	Element Name	Format Type	Format Length	Source	Required	Number of Occurrences	Frequency of Update/ Submission	Edit Criteria	Description/Alias
23	PROD	AN	30	DoD 4140.25M	Yes	30	As Needed		Products
24	PRODCODE	AN	3	DoD 4140.25M	Yes	30	As Needed		Product Codes
25	RECIPIENT	AN	150	DBA	Yes	40	As Needed		Addresses of Recipients of Reports
26	REGION	AN	28	Table 4-6	Yes	18	As Needed		Region/CINC Name
27	REGIONC	AN	2	Table 4-6	Yes	18	As Needed		Region/CINC Code
29	SERVICE	A	20	Table 4-7	Yes	9	As Needed		Service/Agency Name
30	SERVICEC	A	1	Table 4-7	Yes	9	As Needed	A,C,F,V,N,M,D,S, or T	Service/Agency Code
31	SQFT	N	7	Calculated	Yes	1 per BSIZE, per BCLASS	Annually		Total Square Feet in Building Size, Class
32	STATE	A	28	Table 4-6	Yes	120	As Needed		State/Country
33	STATEC	AN	2	Table 4-6	Yes	120	As Needed		State/Country Code

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APPENDIX C

DEIS DATA COLLECTION CARD FORMATS

This appendix contains the card layouts for each of the input data cards as they are submitted by field activities for DEIS I and DEIS II. Tables C-1, C-2 and C-3 show the DEIS I input card layouts; and Tables C-4, C-5 and C-6 show the DEIS II input card layouts.

TABLE C-1

DEIS I - MEA 2 CARD LAYOUT

Card Column	Data Description	Data Element Number*
1-3	Card Type (MEA)	
4	Blank	
5	Card Number (2)	
6	Blank	
7-12	DoDAAC	9
13	Blank	
14-15	Reporting Date (Month)	29
16-17	Reporting Date (Year)	29
18	Blank	
19-21	Product Code	21
22	Blank	
23-29	Opening Inventory	19
30	Blank	
31-37	Total Issues	15
38	Blank	
39-45	Commercial Receipts	4
46	Blank	
47-53	Receipts from DoD	11
54	Blank	
55-61	Closing Inventory	3
62-80	Blank	

*if applicable

TABLE C-2

DEIS I - MEA 3 CARD LAYOUT

Card Column	Data Description	Data Element Number*
1-3	Card Type (MEA)	
4	Blank	
5	Card Number (3)	
6	Blank	
7-12	DoDAAC	9
13	Blank	
14-15	Reporting Date (Month)	29
16-17	Reporting Date (Year)	29
18	Blank	
19-21	Product Code	21
22	Blank	
23-28	Primary Use	22
29	Blank	
30-35	Secondary Use	30
36	Blank	
37-42	Tertiary Use	39
43	Blank	
44-49	Downgrade/Loss	16
50	Blank	
51-56	Aviation	1
57	Blank	
58-63	Service Use 3	33
64-80	Blank	

*if applicable

TABLE C-3

DEIS I - MEA 4 CARD LAYOUT

Card Column	Data Description	Data Element Number*
1-3	Card Type (MEA)	
4	Blank	
5	Card Number (4)	
6	Blank	
7-12	DoDAAC	9
13	Blank	
14-15	Reporting Date (Month)	29
16-17	Reporting Date (Year)	29
18	Blank	
19-21	Product Code	21
22	Blank	
23-27	Quantity 1	23
28	Blank	
29-33	Quantity 2	24
34	Blank	
35-39	Quantity 3	25
40	Blank	
41-45	Quantity to Non-DoD	18
46	Blank	
47-51	Intra Service Transfers	13
52	Blank	
53-57	Inter Service Transfers	12
58	Blank	
59-63	Service Use 4	34
64-80	Blank	

*if applicable

TABLE C-4

DEIS II - MEB 2 CARD LAYOUT

Card Column	Data Description	Data Element Number*
1-3	Card Type (MEB)	
4	Blank	
5	Card Number (2)	
6	Blank	
7-8	Reporting Date (Month)	28
9-10	Reporting Date (Year)	28
11	Blank	
12-17	DoDAAC	12
18	Blank	
19-21	Product Code	24
22	Blank	
23-30	Inventory	17
31-33	Blank	
34-39	Btu Content	5
40	Blank	
41-48	Consumption	8
49	Blank	
50-51	Variance Code	35
52	Blank	
53-60	Funded Consumption	14
61	Blank	
62-69	Component Use	34
70-80	Blank	

*if applicable

TABLE C-5

DEIS II - MEB 4 CARD LAYOUT

Card Columns	Data Description	Data Element Number*
1-3	Card Type (MEB)	
4	Blank	
5	Card Number (4)	
6	Blank	
7-8	Reporting Date (Month)	28
9-10	Reporting Date (Year)	28
11	Blank	
12-17	DoDAAC	12
18-22	Blank	
23-28	Personnel Days in Quarters	22
29	Blank	
30-35	Industrial Process Personnel Days	21
36	Blank	
37-40	Cooling Degree Days	7
41	Blank	
42-45	Heating Degree Days	15
46-80	Blank	

*if applicable

TABLE C-6

DEIS II - MEB 5 CARD LAYOUT

Card Column	Data Description	Data Element Number*
1-3	Card Type (MEB)	
4	Blank	
5	Card Number (5)	
6	Blank	
7-8	Reporting Date (Month)	28
9-10	Reporting Date (Year)	28
11	Blank	
11-17	DoDAAC	12
18-19	Blank	
20	Card (1, 2, or 3)	
21	Blank	
23-26	Product 1 Uses**	
27	Blank	
28-31	Product 2 Uses	
32	Blank	
33-36	Product 3 Uses	
37	Blank	
38-41	Product 4 Uses	
42	Blank	
43-46	Product 5 Uses	
47	Blank	
48-51	Product 6 Uses	
52	Blank	

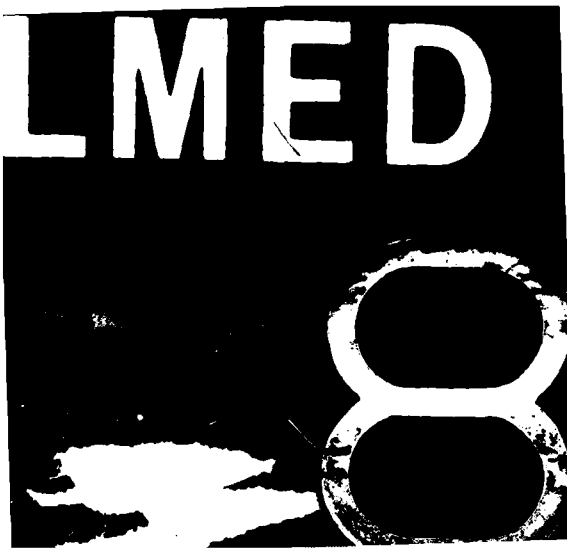
*if applicable

**Products 1-8 on each MEB 5 card are predefined (see Tables 5-10). The usage codes are single letter codes (up to 4 for each product).

TABLE C-6

DEIS II - MEB 5 CARD LAYOUT
(Cont.)

Card Column	Data Description	Data Element Number*
53-56	Product 7 Uses	
57	Blank	
58-61	Product 8 Uses	
62-80	Blank	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